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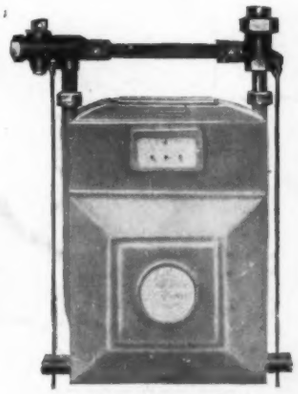

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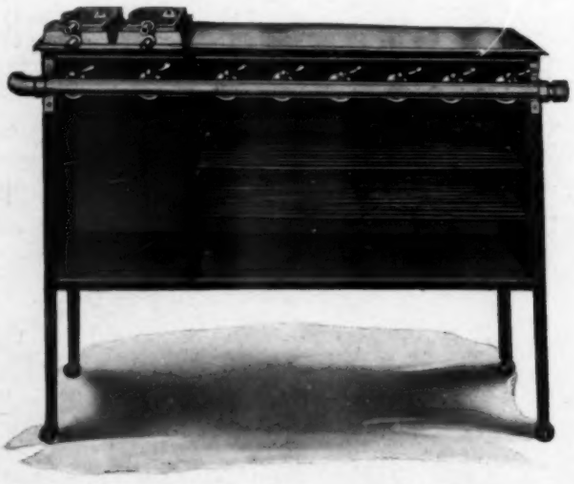

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Gas Predominates Over Oil

Keynote of General Meeting—H. C. Abell Re-elected President

Outstanding among an imposing and brilliant list of papers and reports presented at the first general session of the American Gas Association's Seventh Annual Convention yesterday morning, was that given by Henry L. Doherty, President of H. L. Doherty & Co., of New York City. The session was held in Convention Hall at the ocean end of the Steel Pier and when President H. C. Abell called the meeting to order at 10 o'clock, the huge auditorium was filled to capacity by executives of the gas industry from every part of the country.

Following the reading of a number of telegrams from delegates unable to attend, and the extending of an official welcome to those present by President Abell, a general review of the year's work was outlined by Secretary-manager Alexander Forward. The key note of the secretary's address was sounded in his opening remark. He said: "We here pass another milestone in the history of this association, a year successful as measured by every test — gratifyingly increasing membership, wise and skillful leadership by officers and directors, generous and effective committee service, loyal and enthusiastic support from the industry generally, and built on these, a confident appreciation of our future and determination to meet the expanding needs of the American people whom we serve."

ASSOCIATION MEMBERSHIP HAS INCREASED

In support of the optimism expressed in the foregoing, Secretary Forward stated that the association membership had been increased the past year by the addition of twenty gas companies, four holding companies, sixty-one manufacturer companies, and 515 individual members. The increase in manufacturer companies and individual members, it was reported, was double that of the preceding year. Turning now to a consideration of production and sales figures for the past year, Mr. Forward stated that during the year 1924 the manufactured gas industry produced 441,381,000,000 cu. ft., an increase of 23,381,000,000 cu. ft. over the preceding year. Sales in 1924 were estimated to be 405,200,000,000 cu. ft., representing an increase over 1923 of 20,478,000,000 cu. ft. In concluding his report, the secretary-manager stated that the foregoing figures easily demonstrated a healthy and essentially stable business condition of the industry.

TREASURER BRUNDAGE REPORTS

Following acceptance of the report submitted by Mr. Forward, Treasurer H. M. Brundage, of the Consolidated Gas Co., of New York City, submitted some interesting figures on the financial condition of the association. Total assets of the organization were given as slightly in excess of $100,000.00. Gross receipts for the current fiscal year were $351,805.16, the balance after disbursements were made (as of Sept. 30, 1925) being $9,130.13, an increase over the preceding year of some $7,000.

PRESENT PROBLEMS OF THE GAS INDUSTRY

In short address, entitled "The Present Problems of the Gas Industry," R. M. Searle, President of the Rochester Gas and Electric Corporation, Rochester, N. Y., expressed the opinion that there was not the slightest danger ahead for the gas industry. In asking for greater co-operation from the industry, however, Mr. Searle asked the delegates to take as their motto, the phrase, "On and On." He tempered his general remarks of optimism, however, by stating that there were two very serious problems confronting the industry today. First, he impressed on his hearers the necessity for greater experimental work in the laboratory to improve existing equipment and to this end he asked that every co-operation be given for duplication of experimental work throughout the country. Second, he stated that it was a prime essential in goining the good will of the con-

suming public that each individual company leave no stone unturned in removing obsolete equipment from the home. "Gas," Mr. Searle concluded, "offers the greatest service ever given mankind.

THE RESEARCH LABORATORY

R. W. Gallagher, chairman of the Laboratory Managing Committee of Cleveland, Ohio, next briefly reviewed the founding of the laboratory, the circumstances which made its organization necessary together with a brief outline of the work now being done and plans for future development work. Perhaps somewhat to the disappointment of his hearers, Mr. Gallagher stated that he personally doubted if the laboratory would ever be entirely self-supporting.

Mr. Doherty, as the principal speaker of the meeting was next introduced to the delegates by Mr. Abell. The latter in his introductory remarks said that

MARTIN J. INSULL
Vice-Pres. Middle West Securities Co., Chicago, Ill.

Mr. Doherty had gladly consented to address the meeting and assured his hearers that all would benefit greatly by what they were about to hear. Mr. Doherty in his opening remarks apologized for the general uncompleted features of the address that he had to give, but said that he had forgotten about making the promise. "Any rate," he said, "while I do not doubt Mr. Abell's statement, I do not think I was present when the promise was made."

GAS AND OIL

Mr. Doherty first briefly considered the relative strength of the gas and oil industries and at times went deeply into the technical and chemical manufacturing processes involved. Later, Mr. Doherty brought out many points of direct interest to gas manufacturers. He stated, for instance, that while the oil industry had not been a serious competitor in the past of gas, that from now on, it promised to be a very serious competitor indeed. Again, he criticized the Government regulations on B. T. U standards, stating that the present high standards demanded led to extensive waste of national resources. Mr. Doherty further put forth his belief that in years to come the oil and gas industries would benefit greatly by combining forces and in educating the public to the proper use of the respective fuels.

MR. DOHERTY TAKES ISSUE WITH OIL INSTITUTE

The real crux of Mr. Doherty's remarks were reached in the latter part of his address when he took direct issue with the recent findings of the American Petroleum Institute concerning the nation's oil supply. In pointing out the fallacy of these findings, Mr. Doherty said:

"As to our future oil supply, the situation is truly alarming," Mr. Doherty said. "A committee

SAMUEL T. BODINE
President U. G. I. Co.
Philadelphia, Pa.

of directors of the American Petroleum Institute started out with the avowed intention of proving that we had an ample supply of natural petroleum oil. They have published their report in a book of more than two hundred and

(Continued Page 372)

Commercial Men Discuss Sales Problems

Robert J. Canniff Elected Chairman

The Commercial Section met yesterday afternoon to nominate and elect officers for the coming year and to listen to several very interesting addresses. Retiring Chairman James P. Hanlan called the meeting to order and called for the report of the nominating committee.

Robert J. Canniff, Central Hudson Gas and Electric Company, Poughkeepsie, N. Y., was nominated as chairman; J. J. Burns, the Laclede Gas Light Company, St. Louis, Mo., vice chairman. They were unanimously elected. The report of the nominating committee was made by J. E. Davies, chairman of that committee.

THE JOB AHEAD IN SELLING

The first speaker was R. J. Canniff, the now chairman, who deliv-

ered an address on "The Job Ahead in Selling."

Mr. Canniff gave a comprehensive analysis of the domestic sales problem. He said that of the do-problem. He said that men of vision must lead in the commercial end of the gas business. The inability of gas men to get together and view the sales problem in the correct light are important factors in retarding the growth of the gas industry. He said: "The industry needs men who are willing to dream dreams, men who are willing to conduct some commercial experiments—men who will try once and still again, men big enough to co-operate for the advancement of the industry as a whole." He emphasized the importance of honor service, of radio broadcasting, national advertising and the gold star trade-mark movement.

R. L. CANNIFF
New Chairman of Section

ORGANIZING THE SALES DEPARTMENT

The next speaker was Prof. Melvin T. Copeland, Director of the Bureau of Business Research of Harvard Graduate School of Business Administration, who delivered a talk on "Organizing the Sales Department." Despite his own deprecation of his lack of technical knowledge of gas problems, Prof. Copeland appeared to have a very keen insight into the difficulties of the industry.

"I have only a layman's knowledge of gas," said Prof. Copeland, and then went on to demonstrate that his understanding of the business was by no means a superficial one. "Just because gas can be bought only from the gas company is no reason for the gas company to rest on its laurels," he said. "There may be no competition within the industry, but there is plenty of competition from outside sources and it is up to the gas industry to look forward, and begin to merchandise. Gas men are not as good merchandisers as are most other modern industries. The gas company is suffering from a tradition. That tradition is that merchandising effort is not essential for the gas industry because consumers can buy gas elsewhere. But the industry is here mistaken. Wants for gas do not arise automatically any more than do wants for any other commodity. The desire must be stimulated. After the want is aroused and satisfied the customer must be not only pleased, but enthusiastic, and must be a word-of-mouth advertiser for gas."

TRAINING OF METER READERS

Prof. Copeland suggested that meter readers be trained to assist in home service, that they report prospects to the office, and that they notice where new equipment or repairs on old equipment are needed. He said "gas men can know their field as very few industries can. They can get an absolutely perfect estimate of the number of prospects.

SELLING DIRECT TO CONSUMER

Martin J. Pierce gave a talk on "Selling Direct to the Consumer." "This is not a new method of advertising," he said. "It is one that has been used by the old-fashioned hack peddler for years. It is, however, a new method of distribution for the legitimate retail dealer. The method has proven particularly valuable during periods of unusual sales resistance. This method of selling is just as scientific and requires just as careful preparation as any other method used. It requires a very forceful and very high type of salesmanship. House to house canvassing is no job for a lazy man." He indicated that the gas industry would do well to go out after business as other industries are doing, instead of waiting for business come to them.

Continued on page 374)

Technical Men Discuss Carbonization

J. P. Haftenkamp Elected Chairman of Section for 1926

The technical men of the gas industry opened their sessions at the 1925 convention yesterday afternoon in a meeting which took place in the Steel Pier. A large number of engineers and chemists from all over the country were present to greet the Chairman, R. C. Cornish of the American Gas Company, Philadelphia, Pa., who opened the meeting with an address.

In his talk Mr. Cornish emphasized the fact that the gas industry of the country looks to the technical men for increased efficiency in the manufacture and distribution of gas and therewith for a decrease in the cost, so that the domestic and industrial salesman may be provided with a product of high efficiency and competitive cost with which to meet the claims of salesmen of other fuels in their fields. The technical problems today in the gas industryare of greater magnitude than ever and require careful application on the part of the gas engineer. As the sales of gas increase it follows that rapid equipment are necessary. It is up to the technical man to be prepared for this development when it

comes. Then again the diminishing supplies of raw materials of one sort or another and the increasing prices make it necessary that technical men make most careful study of manufacturing methods so as to attain greater economy in production and to install apparatus best suited to the use of the available raw products. As Mr. Cornish said: "Coupled with this is the adaptation of existing plants and distribution systems to the ever-increasing demand by so extending them that there will be no undue scrapping of the plants or mains. This must be done in such a manner that they will be sufficiently flexible to take care of seasonal loads as well as future requirements."

NEW OFFICERS ELECTED

After the chairman had delivered his address the report of the Nominating Committee was called for. L. J. Willien of C. H. Tenney & Co., Boston, Mass., made the following report:

For Chairman, Joseph P. Haf-

L. J. WILLIEN
C. H. Tenney & Co.,
Boston, Mass.

tenkamp, Rochester Gas & Electric Co., Rochester, N. Y.

For Vice-Chairman, Walter C. Beckjord, American Light & Traction Co., New York City.

The election of these two gentlemen was unanimous.

The meeting than had the great pleasure of listening to a paper entitled Types of Gas Plants and Quality of Gas Best Suited for the Development of the Gas Industry, which was read by J. A. Perry of the United Gas Improvement Co., Philadelphia, Pa.

Mr. Perry said:

"Owing to the extreme fluctuations in the cost of gas oil, as shown by our past experiences, and the probability of still higher oil costs throughout the future, the quantity of oil used in any gas manufacturing process should be limited to as low an amount per unit of 1000 cubic feet of gas as possible."

In order to do this, as well as to satisfactorily handle and economically develop the gas business with existing types of gas manufacturing apparatus, Mr. Perry said that heating value standards at least as low as 440 B. t. u. and possibly as low as 400 B. t. u. would become necessary. He also added that this would serve to reduce the cost of making gas.

"With such a standard we can fashion or make the gas supplied of practically the same gravity throughout the year, notwithstanding wide variations in gas demands," he said.

"This lower standard of 440 B. t. u. heating value will, especially with the use of coal-gas plants, greatly reduce the amount of oil required for gas making, and this in turn should tend to stabilize

R. S. FULLER
Eng. Distributing, Pacific Coast Gas & Electric Co.
San Francisco, Cal.

carburetted water gas would be the cost of any necessary lightly the cost of gas oil. Therefore, the cost of any necessary lightly carburetted water gas would be

(Continued on Page 373)

Accountants Hold Initial Session

Relations With Customers Principal Topic Of Discussion

In the Vernon Room at Haddon Hall, yesterday, the accounting men of the gas industry held their first session of the convention. A large and enthusiastic crowd of men greeted the opening address of the chairman of the section, H. C. Davidson, of the Consolidated Gas Co., of New York City.

In his address, Mr. Davidson reviewed the work of the section for the past year and told about the various problems that are agitating the minds of accounting men at the present time and of the progress that has been made by the various committees and sub-committees on these important matters. Attention was called as well to the very attractive and instructive exhibits that are on display this year on the Steel Pier under the auspices of the Accounting Section. One feature is the demonstration of actual billing for the Camden district, which is being conducted on the

platform at the extreme end of the exhibit space on the Pier.

DE WITT CLINTON ELECTED NEW CHAIRMAN

The Nominating Committee then made its report through its chairman, W. A. Sauer, People's Gas, Light and Coke Co., Chicago, Ill. The report of the committee was as follows:

For chairman, DeWitt Clinton, Worcester Gas Light Co., Worcester, Mass.

For vice-chairman, Albert L. Tossell, The People's Gas Light and Coke Co., Chicago, Ill.

Both these gentlemen were elected unanimously.

The next business on the program was the reading of the report of the Exhibit Committee by its chairman, P. D. Warren, of the People's Gas Light and Coke Co., Chicago, Ill. In this report, Mr. Warren described the efforts that the committee have made this year in arranging for various exhibits on the Steel Pier. The exhibits on the Pier are both complete and very instructive, and are well worth the time of any accountant and gas man who takes advantage of this opportunity of visiting them and learning all about the new methods that are in use today for recording gas consumption, billing, and carrying out all the other accounting details that fall to the task of the accounting department of a gas company.

De WITT CLINTON
New Chairman of the Section

RELATIONS WITH CUSTOMERS

The principal business of the meeting, Tuesday afternoon, was the report of the Committee on Relations with Customers. The report of this committee was presented through its Chairman W. A. Doering, Auditor, Boston Consolidated Gas Company, Boston, Mass.

Mr. Doering in his introduction stated that the "task before the committee this year was not an easy one" and that it was decided to divide the work into three groups or three sub-committees, viz., on company standards in treating with customers, on the gas and company and the telephone, and on the company contact through customer and employe ownership. After thanking the members of the committee for their support during the past year the chairman of the committee called upon the chairmen of the various sub-committees in succession to read their reports.

STANDARDS IN CUSTOMER RELATIONS

R. F. Bonsall, of the Consolidated Gas Electric Light and Power Company of Baltimore, chairman of the sub-committee on gas company standards in treating with customers read his report next. He called for the elimination of red tape in dealing with customers and advised gas company executive and accountants to take steps to make the contact between the customer and the gas company as free from artificiality as possible, so as to have the customer who enters the office of the gas company to pay a bill or make a complaint or for any other purpose whatsoever feel perfectly at home. He suggested that the gas be turned on by the gas company when it is needed, without any delay and without waiting to establish the customer's credit rating; that deposits on gas meters be dispensed with except in cases where the customer is known to be financially irresponsible; and that immediate refund be made in all cases where bills are overpaid or paid twice.

USE LOCKED COLLECTION BOXES

He cited the experience of one gas company which had materially improved public relations by placing locked boxes outside the office building as well as inside in order that bills might be paid promptly without waiting in line, and after hours if desired. Other subjects discussed in his report were the policy of allowances, such as those due to fast meters, those due to leaks in the company's equipment, those due to waste of gas through automatic appliances, allowances on first and final bills, on charges for repairs, etc., and on disputed charges. He also discussed the reasons why only men trained in company practice should be used as outside service salesmen.

L. L. MOORE
Inviting Votes in the "Beauty" Contest

In conclusion he said: "Your committee has heard the expression—'It costs too much to follow such Practice.' When you consider that public service commissions recognize in the rate the difference between a satisfied public and a dissatisfied one, the cost of such a program is justified."

GAS COMPANY AND THE TELEPHONE

The next report was read by the chairman of the sub-committee on the gas company and the telephone, J. M. Roberts of Chicago, Ill. In this report there were brought out the various important relationships that exist between the good will and friendly feeling that may exist in a community for the gas company and the manner in which the telephone is answered when the customer phones the gas company. The report goes into considerable detail in describing the correct procedure along these lines and tells what the gas company employe must not do if the good will of the customer is to be retained.

CUSTOMER OWNERSHIP

The final report was read by C. R. Stull, of the American Gas Company, Philadelphia, Pa., on "Gas Company Contacts Through Customer and Employe Ownership.

Gas Must Prevail As Industrial Fuel

Industrial Men Listen to Address On Need for Strong Policy

The first session of the Industrial Gas Section of the A. G. A. was held Tuesday afternoon in the Music Room of the Chalfonte. After a few introductory remarks by the Chairman, H. D. Loebell, vice-president of the Combustion Utilities Corporation, of New York, the Nominating Committee: Mr. H. H. Clark, of Chicago, chairman, presented the following names: For chairman, F. F. Cauley, of the Peoples Gas Light and Coke Company, of Chicago; for vice-chairman, C. C. Krausse, of the Consolidated Gas, Electric Light and Power Company, of Baltimore. It was regularly moved and seconded that they be elected by acclamation and same was carried out.

Messrs. Cauley and Krausse made brief speeches of acceptance.

CHAIRMAN LOEBELL MADE ADDRESS

Mr. Loebell described two distinct phases of the work—commercial and technical. The first deals with the sale of standard equipment, the second with the investigation of new problems. Therefore the industrial department managers must supervise two functions. Commercially he acts as a sales manager. Technically his work is more complex, his being the part of the adviser.

Since gas as a fuel cannot compete on a B.T.U. basis it behooves the gas man to develop equipment capable of securing operating economies. The customer wants a certainty of cost advantage over other methods.

It is to be recalled that every problem involves three parties, the prospective consumer, the gas company and the manufacturer of equipment.

The gas company wanting the load must concentrate its patronage on a few limited manufacturers so that the profits assured them will justify them in carrying on research work.

POLICY COMMITTEE REPORTS

The report of the Policy Committee, Mr. F. F. Cauley, chairman follows: In the course of the report the following recommendations were made:

(1) That gas company executives familiarize themselves *personally* with existing conditions by accompanying the sales engineers in the industrial field.

(2) The keeping of a weekly record in journalistic form of the industrial section's operations and progress.

(3) A more liberal policy in financing large industrial installations.

(4) That the industrial sales engineer do missionary work with the company manager.

(5) That gas heating like charity should "begin at home"—the companies to use gas in all their *own* heating problems.

Furthermore, the report recommended a more liberal policy in advertising gas; investigating new applications; sending students for short courses in gas engineering; missionary work in trade and engineering societies; addressing public meetings of industrial gas possibilities; encouraging the men to contribute to trade magazines; surveying its own field. During the discussion following the report it was voted to print the report and distribute same to the various managers.

A. P. BRILL
Gen. Mgr. Ruud Mfg. Co.
Pittsburgh, Pa.

SURVEY COMMITTEE

Next came the report of the Survey Committee by its chairman, R. E. Ramsay, of the United Gas Improvement Company of Philadelphia. The speaker emphasized among other things—that gas as a fuel will be the ultimate fuel in industrial heating operations.

The proper development of a business involves a competent survey. This is particularly true in the gas field. Therefore, a man for surveys is essential. Often gas companies feel they know their field but a survey proves this a mistake.

SCOPE AND OBJECT OF SURVEY

The scope of the survey involves

(Continued on page 374)

The President's Luncheon

Many Prominent Gas Men Attend

State chairmen of the National Conference on Information Committee work met many prominent gas company excutives at a luncheon arranged by Mr. H. C. Abell, President of the A. G. A., at the Traymore Hotel, Tuesday.

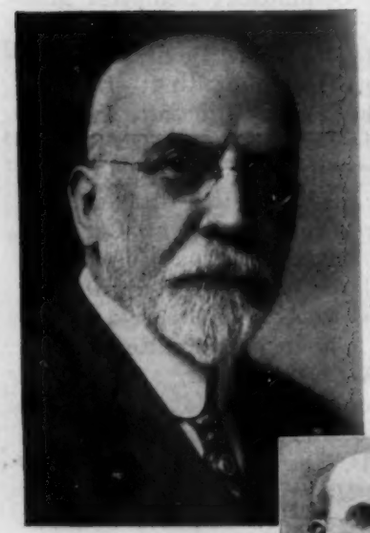
Mr. Abell stated that the object of the luncheon was to bring together at this time the chairmen of the various state organizations and the gas company executives attending the A. G. A. meeting.

Short addresses were made by several, but the keynote of the conference was expressed by Mr. B. J. Mullaney when he stated that the principal aim of all was to spread authoritative information to the general public regarding public utility companies. Meetings will be held Wednesday and Thursday afternoons, and it was strongly urged by all speakers that every executive of gas companies should attend.

Those in attendance at the luncheon included:

H. L. Doherty, President, H. L. Doherty & Co., New York, N. Y.; T. V. Purchell, Vice-President, Peoples Gas Light and Coke Co., Chicago, Ill.; C. L. Kirk, Vice-President, Citizens Gas Co., Indianapalis, Ind.; H. S. Schutt, Vice-President, The C. H. Geist Co., Philadelphia, Pa.; Charles Munroe, Chairman, Laclede Light Co., St. Louis, Mo.; R. B. Brown, Vice-President, Milwaukee Gas Light Co., Milwaukee, Wis.; B. J. Denman, Vice-President, The United Light & Power Co., Davenport, Iowa; H. T. Edgar, Division Manager, Stone & Webster, Inc., Boston, Mass.; T. R. Beal, President, Central Hudson Gas & Electric Co., Poughkeepsie, N. Y.; C. E. Paige, Vice-President, Brooklyn Union Gas Co., Brooklyn, N. Y.; D. D. Barnum, President, Boston Consolidated Gas Co., Boston, Mass.; T. N. McCarter, President, Public Service Electric & Gas Co., Newark, N. J.; W. A. Baehr, President, North American Light & Power Co., Chicago, Ill.; A. P. Lathrop, President, American Light & Traction Co., New York, N. Y.; R. W. Gallagher, Vice-President, East Ohio Gas Co., Cleveland, O.; H. M. Lytle, Vice-President, Chicago Rapid Transit Co,, Chicago, Ill.; O. H. Fogg, Vice-President, Consolidated Gas Co. of New York; Julius Hecht, Vice-President, Public Service Co. of Northern Illinois, Chicago, Ill.; P. H. Gadsden, Vice-President, United Gas Improvement Co., Philadelphia, Pa., Chairman, Pennsylvania Committee; C. H. Howell, General Manager, Atlantic City Electric Co., Atlantic City, N. J., Chairman, New Jersey Committee; Percy Redmund, General Manager, Southwestern Bell Telephone Co., St. Luis, Mo., Chairman, Missouri Committee; J. S. Pevear, Vice-President, Birmingham Electric Co., Birmingham, Ala., Chairman, Alabama Committee; O. J. Shaw, President, Lincoln Traction Co., Lincoln, Neb., Chairman, Nebraska Committee; H. B. Flowers, President, New Orleans Public Service Inc., New Orleans, La., Chairman Louisiana-Mississippi Committee; Stuart Cooper, Vice-President, Charleston Cons. Railway & Lighting Co., Charleston, S. C., Chairman, Carolinas Committee; B. J. Mullaney, Vice-President, Peoples Gas Light & Coke Co., Chicago, Ill., Director, Illinois Committee; C. M. Benedict, President, Des Moines Gas Co., Des Moines, Iowa, Member, Iowa Committee; W. G. Murfit, Secretary-Treasurer, Bucks County Public Service Co., Newtown, Pa., Member, Carolinas Committee; S. E. Boney, Director, Carolinas Committee; H. M. Blain, Director, Louisiana-Mississippi Committee; R. V. Prather, Member, Illinois Committee; Dempster MacMurphy, Member, Illinois Committee; H. M. Davis, Director, Nebraska Committee; J. S. S. Richardson, Director, Pennsylvania Committee; W. P. Strandborg, Director, Oregon Committee; J. B. Sheridan, Director, Missouri Committee; Joe Carmichael, Director, Iowa Committee; Willard Cope, Director, Georgia Committee; L. C. Bradley, Director, Alabama Committee; E. F. McKay, Director, Oklahoma Committee; Geo. McQuaid, Director, Texas Committee; G. E. Lewis, Director, Rocky Mountain Committee; S. T. MacQuarrie, Director, New England Committee; F. W. Crone, Director, New York Committee; J. C. Mellett, Director, Indiana Committee; A. Fischer, Director, Michigan Committee; E. W. Hodges, former Director, Arkansas Committee; A. F. Herwig, Director, Wisconsin Committee; L. S. Storrs, Managin Director, American Electric Railway Association; Labert St. Clair, Advertising Director, American Electric Railway Association; M. H. Aylesworth, Managing Director, National Electric Light Association; George F. Oxley, Director of Information, National Electric Light Association; W. H. Hodge, Advertising Manager, H. M. Byllesby & Co., Chicago, Ill.; A. W. Flor, Public Relations Department, Electric Bond & Share Co., New York, N. Y.; V. M. Carroll, Director of Public Relations, Laclede Gas Light Co., St. Louis, Mo.; H. C. Abell, President, American Gas Association; Alexander Forward, Secretary - Manager, American Gas Association; H. W. Hartman, Assistant Secretary - Manager, American Gas Association; F. L. Blanchard, Chairman, Pub. & Adv. Section, American Gas Association; C. W. Person, Secretary, Pub. & Adv. Section, American Gas Association; Henry Obermeyer, Assistant Secretary, Pub. & Adv. Section, American Gas Association.

*"The Old Guard"—Pioneers of



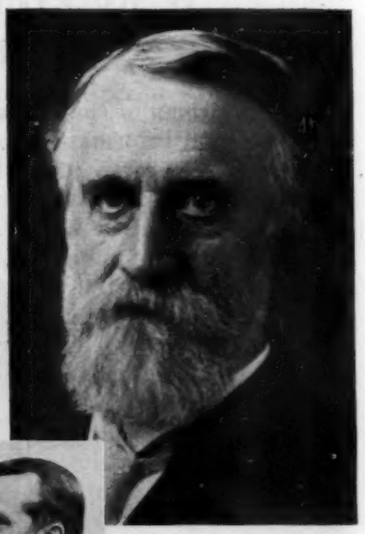
George G. Ramsdell

GEORGE G. RAMSDELL

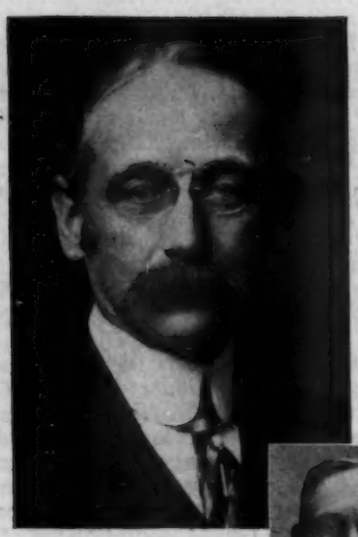
Born Providence, R. I., April 30, 1848. Completed course, Vincennes University, 1863. Undertook to organize a company to heat Vincennes from a central plant. Officials of Citizens Gas Company became interested in project resulting in his appointment as manager and treasurer, in 1877. In 1890 he became general manager of American Gas Company, Philadelphia. In 1911 was elected secretary and treasurer of American Gas Institute. Has been a member headquarters staff of the A. G. A. since its formation.

CHARLES H. NETTLETON

Born New Haven, Conn., June 29, 1850. Graduated, College of the City of New York, 1870. Entered the gas business the same year at Mount Vernon, N. Y., Coming to Derby, Conn., in June, 1871, where he had charge of the building of the Derby Gas Works. Made secretary and treasurer of the Derby Gas Company (now the Derby Gas and Electric Company) 1871, and president and treasurer, 1900, which office he still holds.



Charles H. Nettleton



Alex C. Humphreys

ALEX C. HUMPHREYS

Entered the gas business in 1871, at twenty years of age. In 1872 became secretary and treasurer of the Bayonne and Greenville Gas Light Company, New Jersey. Originator of firm of Humphreys and Glasgow of London, designers and builders of water gas plants, Humphreys and Glasgow of New York, consulting engineers, and later, Humphreys and Miller of New York. Retired three years ago to devote himself exclusively to Stevens Institute, of which he is president.

FRANK D. MOSES

Born Great Falls, New Hampshire, 1858. Entered the gas business in 1874 as a lamplighter at Sterling, Illinois. Was engaged in gas company activities until 1898 when he went to Trenton, N. J., and had charge of building of new gas plant, later absorbed by the South Jersey Gas, Electric & Traction Company. He was chief engineer of this company until 1903, when he incorporated and became president of the Gas Engineering Company, which position he still holds.

Frank D. Moses

* Courtesy A. G. A.

the Gas Industry Still in Harness

Walton Clark

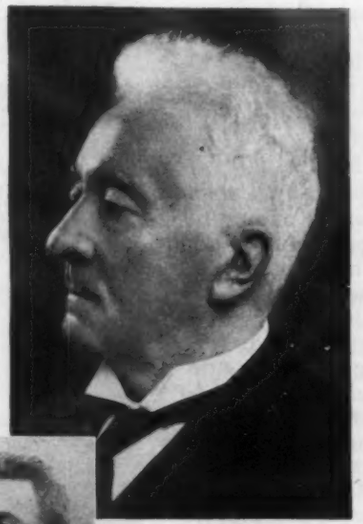
WALTON CLARK

Born Utica, N. Y., 1856. Entered the gas business with the New Orleans Gas Works, 1873. Joined the United Gas Improvement Company in 1883 and has ever since been in its employ, holding the offices of assistant general superintendent, general superintendent and vice president of the company. At the present time he is consulting engineer of the company.

Edward C. Jones

EDWARD C. JONES

Born South Boston, Mass., February 8, 1861. Entered the employ of the South Boston Gas Light Company, July 5, 1870. In May 1891, he moved to San Francisco, and finally became chief engineer, gas department, Pacific Gas and Electric Company. The last position he held until Feb. 1, 1920, at which time, he say, "I decided to give up the strenuous part of my work and see a little more of my little paradise among the redwoods at Woodside." He has continued consulting and court work since.



Frederick Egner

FREDERIC EGNER

Born March 5, 1846. In July 1872, entered the employ of the Metropolitan Gas Light Company of New York. May 7, 1883, became engineer of the Peoples Gas Light and Coke Company, of Chicago. In August of same year was made engineer and superintendent of the Laclede Gas Light Company of St. Louis. In 1890 joined the Standard Gas Light Company of New York, and in 1893 became general superintendent of the City Gas Light Company, of Norfolk.

(Continued from page 364)

fifty pages, and while the casual reader may get the impression from this report that we have an adequate supply of petroleum, a careful analysis of this report would not convince any intelligent man that if war should come again, even within thirty-six months, we as a nation would be certain to have an adequate supply of available petroleum."

NO ADEQUATE SUPPLY AVAILABLE

Mr. Doherty said that, as the committee was unable to show that the nation has an adequate supply of natural petroleum, they fell back on the assurance of a supply of oil from shale oil and coal beds.

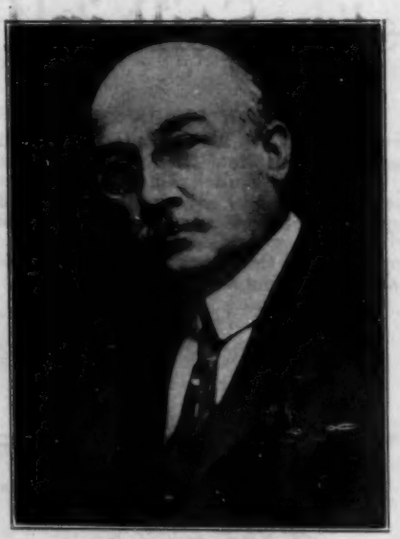
"They tell us," he said, "that we can possibly produce as much as two trillion, ninety-five billion, four hundred million (2,095,400,000,000) barrels of oil from coal. Yet they are compelled to admit in this same report that if all the coal mined in 1924 had been processed for oil recovery, it would have produced barely more than three per cent. of the total of all the motor fuel required in 1924.

"Even accepting the amount of motor fuel the committee claims this coal would have produced, it would not even have been a substantial contribution to the increased needs of motor fuel required in 1925 over and above that required in 1924.

SHALE BEDS

"You can get your own measure of the seriousness of our reserves of natural petroleum when practically the whole of the oil industry turns itself inside out, and, after working for seven months, is unable to prove that we have anything like an adequate supply and attempts to point to our shale beds and especially to the oil that can be secured by the distillation of coal as a guarantee to this nation that we have an adequate supply."

If the committee's figures on the production of oil from shale were accepted, according to Mr. Doherty, the industry would have to mine and process more than a thousand tons of shale to provide the fuel required to operate a single one of our modern warships at full speed for a single hour.



JOHN GRIBBEL
President Tampa Gas Co.
Tampa, Fa.

"The American oil industry has had no experience in the production of oil from either shale or coal," he said. "When the men experienced in the production and handling of natural petroleum oil refuse to make an estimate of our remaining reserves, and point to our shale beds and our coal deposits as a source of oil, you men are in a much better position than anybody else to realize how wholly visionary and impractical it would be to be compelled to depend for our oil upon either coal or shale."

OSCAR H. FOGG
Vice-Pres. Consolidated Gas Co.
New York

OIL, A COMPETITOR OF GAS

Following Mr. Doherty, Horace C. Porter, chemist and fuel engineer of Philadelphia, Pa., gave an illuminating discourse on the possible future possibilities of oil being a competitor with the coal gas industry. Mr. Porter in some statistical data, showed that while the demand for oil as fuel had been increasing, it did not nearly approach the increasing demand for coal gas. "The motor bus" Mr. Porter told the convention, "and eventually air transport will add their bids to that of the automobile and the Diesel engine for the oil supply of the country. Gas works therefore will find it continuously more expensive to make gas from oil. This will give way more and more to coal gas manufacture, which, incidentally, makes more coke an excellent anthracite substitute as a household fuel."

THE PRESIDENT'S MESSAGE

Early in the meeting, following the reports of the Secretary-Manager and the Treasurer, Mr. Abell gave his annual presidential message to the convention. Mr. Abell took as the keynote for his remarks the fact that the Association had brought about unified effort in the gas industry in the service of the American public. He brought out the work performed by the various sections of the Association. In conclusion he considered at some length the various phases of activity which the Association has under consideration. In this connection he stated that gas apparatus and appliance manufacturers have been most helpful in the development of the gas business as a whole. He said:

"When gas lighting was threatened, the appliance manufacturers came to the rescue in a most admirable way, and many of those concerns are doing business today, and with some of the original officers still at the helm. It has been felt, however, that there have been so many unusual demands for gas utilization that some way should be provided for proper and ade-

quate research work to develop to meet the demands and opportunities for a much larger and intensive utilization of gas. This problem is in the committee stage. I know that when recommendations are finally made that the industry will extend itself to make the gas industry of greater and more service to mankind.

MR. ABELL RE-ELECTED PRESIDENT

The final business of the meeting concerned the report of the Nominating Committee. The report, as submitted, recommended that H. C. Abell, vice-president of the Electric Bond and Share Company, be re-elected as president of the American Gas Association. The report was unanimously approved. The other officers selected for the coming year are as follows: Alexander B. MacBeth, vice-president and general manager of the Southern California Gas Company, of Los Angeles, as vice-president of the Association; directors: T. R. Beal, president of the Central Hudson System, Poughkeepsie, N. Y.; Arthur Hewitt,, general manager of the Consumers Gas Company, Toronto, Canad; R. M. Leach, treasurer of the Glenwood Range Company, formerly United States Representative from Massachusetts; Henry C. Morris, vice-president and general manager of the Dallas Gas Company, Texas, and George W. Parker, president of the Parker-Russell Mining and Manufacturing Company, of St. Louis, Mo.

(Continued from page 366)

stabilized and much lower than would be the case if a higher heating quality of gas were supplied."

PROGRESS IN GAS INDUSTRY INTIMATELY CONNECTED WITH CONSERVATION OF RESOURCES

In a very interesting address which was the next feature in the afternoon's program, Dr. H. A. Curtis, Professor of Chemical Engineering in Yale University, New Haven, Conn., discussed the important relationship which exists between the progress that has and will be made in the gas industry with the conservation of fuel resources, the preservation of our forests and the many vital problems that are giving the American farmer so much concern these days. He said: "The adoption of the coke oven in the gas industry is only one phase in what appears to be a real revolution in methods of gas manufacture and if this results in an expansion of the industry, the production of by-product nitrogen will likewise expand." His address was concerned mainly with a discussion of the nitrogen question, which is after all of paramount important to all, as nitrogen is the essential element in the agricultural industry, in peace industries as well as in war industries. The independence of a country from foreign sources of nitrogen is an essential condition in the freedom of that country from external control.

G. I. VINCENT
Originator of the "Bill Jones" Idea, Syracuse, N. Y.

In conclusion he said:

"If this results in an expansion of the industry," he said, "the production of by-product nitrogen will likewise expand. If the synthetic ammonia which is now produced in several small plants in the United States can eventually be produced cheap nough to be used as fertilizer, these synthetic products will then enter into direct competition with the Chilean nitrate and by forcing the price downward will indirectly affect the price of ammonium sulphate."

CARBONIZATION

The remainder of the meeting was taken up with the report of the Carbonization Committee and a discussion of the various parts of that report. The main report of the committee was read by the Chairman, A. B. Beebe of Rochester, N. Y. Mr. Beebe outlined the work of the various sub-committees during the past year, paying particular attention to the studies made of carbonizing plant tests, the conduction of these tests and the various researches made into the determination of the characteristics of coke, especially its reactivity and its use in the water gas process. A number of papers were also read as part of the committees report.

The Operators' Section reported through its chairman, D. W. Wilson of the Iroquois Gas Corporation, Buffalo, N. Y. A paper entitled A. G. A. Coke Tests, which was in the nature of a report on proposed tests by the Bureau of Mines was read by A. G. Fieldner of the Bureau.

LOW TEMPERATURE CARBONIZATION AND COMPLETE GASIFICATION

The sub-committee which was concerned with these two important matters made its report through its chairman, A. W. Warner of the Philadelphia Suburban Gas & Electric Co., Chester, Pa. The Operating Service Bureau presented its report through W. D. Stewart, Chairman, Coal Products Manufacturing Co., Aurora, Ill. A paper was also read on Fusion Zone in Coke Ovens by William P. Ryan, rector of the Buffalo Station, School of Chemical Engineering Practice, Mass-Another paper on the Carbonizaachusetts Institute of Technology. tion of Non-coking Coals was read by William Odell of the United States Bureau of Mines,

Minneapolis, Minn. In this paper special reference was had to lignite coal.

Low Temperature Tars, a paper in which the composition of these tars was described, was read by J. D. Davis and A. E. Galloway of the Pittsburgh Experiment Station, U. S. Bureau of Mines, Pittsburgh, Pa.

Domestic Coke was the subject of a paper read by J. D. Davis and L. D. Karrick, in which there were discussed the factors that affect the formation of coke. A progress report on the study of coke as carried out in the Massachusetts Institute of Technology was read by R. T. Haslam.

BUILDERS' SECTION

This part of the Carbonization Committee report contained individual reports read by W. E. Steinwedell of the Gas Machinery Co., Cleveland; F. G. Curfman of the Improved Equipment Co., New York City; Harold J. Rose of the Koppers Co., Pittsburgh, Pa.; D. B. Sutherland of the Russell Engineering Co., St. Louis, Mo., and F. J. Kennedy of the West Gas Improvement Co., New York City.

(Continued from page 368)

going into each industry and making a thorough study of each individual heating operation. The object of survey is the answer to the following questions: Where, when and how we can sell gas?

A proposed survey should be divided into two sections. A general committee to outline work and compile data, and a committee to secure information.

Most gas companies have made a survey of some sort but the data has not been followed up. A complete survey should show whether contemplated business will show a profit. Large gas companies should use their technical men, the smaller ones would be helped if the A. G. A. maintained a corps of engineers to be loaned to gas companies, or if manufacturers of industrial gas equipment did the same.

GAS AND COMPETING FUELS

An address on "Gas vs. Competing Fuels" by D. W. Chapman of the Peoples Gas Light and Coke Company of Chicago came next.

F. F. CAULEY
Manager Industrial Gas Dept. Peoples Gas Light & Coke Co., Chicago, Ill.

Mr. Chapman in a very lucid, brief, yet comprehensive talk discussed the problem of meeting competition.

Propounding first the question: "Why so many fuels in industry?" he admitted price to be a factor but not a deciding one. The situation was paralleled a few years ago in the lighting field. Sheer efficiency won the day for the electric light men. Some medium of heating will shortly be generally adopted for industrial processes. The choice seems to be between gas and electricity. Within the next few years in all probability the progress made by engineers in the design of gas and electric furnace equipment will determine for all time which will be supreme.

(Continued from page 365)

MISS SWAN REPORTS ON HOME SERVICE

Next on the program was Miss Ada Bessie Swann, chairman of the home service committee, who gave the committee report after drawing a poetic picture of the home. She gave as a definition of the home, "a place where a woman is, where she can take care of those she loves." It is the purpose of the Home Service Committee, said Miss Swann to help women take care of their homes, and its kindly, thoughtful advice and help are appreciated by the women who take advantage of the service.

"All women are alike," said Miss Swann. "They are made to be homemakers and nothing else. That is the reason no jazz or ukeleles are needed to attract the womne to the meetings of the home service committees of the various gas companies."

COMMITTEE FOUR YEARS OLD

The Home Service Committee officially made its debut with the American Gas Association four years ago. Since then, every year has been marked by rapid progress. The report delivered by Miss Swann at yesterday's meeting indicated an increase of over sixty gas companies having Home Service Departments in the last two years, making the total now about seventy-four companies. "The basic purpose of the Home Service Department in a gas company" reads the report, "is to sell more gas by teaching the homemaker how to use gas more efficiently. There is, however, an underlying, a more idealistic purpose associated with it. We could not have promoted this work had there not existed the conviction that in doing so we were helping to create a more perfect home for the American people.

J. H. HARTOG ADDRESSES MEETING

Mr. Hall was scheduled as the last speaker, but his place was who gave a forceful talk on the Portland Gas and Coke Company who gave a forceful talk on the idea that the wasteful use of fuel is wrong and the scientific use of gas is right. "You can't stop the popularity of gas any more than you can stretch out your arms and stop the Atlantic," said Mr. Hartog. He also gave an object lesson in advertising, relating his experiences in using human models for the ads. It creates greater human interest, he said. He has made a special study for the past years in selling heating appliances for the home, and gave rather good advice in this branch of merchandising.

A MAXIMUM DEMAND INDICATOR

This is the day of the demand meter. Considerable attention is being paid to this type of meter and at the exhibit on the Steel Pier there are to be found many developments along these lines, indicating that much time has been spent by the manufacturers to develop a demand meter that will meet the requirements of the gas man.

A very simple and effective contrivance has been developed by Mr. J. M. Spitzglass of the Republic Flow Meter Company which occupies booth No. 428 on the Pier. This contrivance, which is made so that it can be easily attached to any standard type of meter, operates in tapping a column of liquid in an overflow tube attached to the meter and then the rate of flow is read off a calibrated scale.

Home Service Booth Attracts Large Crowds

Many Visitors See Birthday Cakes Baked

Quite the most interesting spot of the day for many of the ladies attending the convention was that spent yesterday at the exhibit of the Home Service Committee of the A. G. A. on the Steel Pier.

There the fourth birthday of the Home Service section was celebrated with fitting ceremonies and the baking of a great three-layered birthday cake, and for the Home Service section Miss Ada Bessie Swann and Miss Marjorie Pidgeon accepted many expressions of congratulation.

While it was impossible to state with any accuracy how many ladies stopped at the booth during the day, there were about 150 at the demonstration of cake baking and decoration in the afternoon. Perhaps 500 for the entire day would closely approximate those who made inquiries and took away copies of the recipes, according to Miss Pidgeon.

THE CAKE "IDEAL"

The birthday cake had a felicitous name, being called Ideal. Other preparations of the afternoon were chocolate delights, a divinity loaf, angel cake and nut kisses.

Officiating over the activities of the booth throughout the day, besides Misses Swann and Pidgeon, there were, Miss Ina B. Rowe of the Home Service Department of the Hudson Gas and Electric Company, Poughkeepsie, N. Y., and Miss Jessie B. Lane, Adirondack Power and Light Company of Schenectady, N. Y.

MANY VISITORS

Among visitors to the booth were many other Home Service women visiting the convention. Some of these were Miss Ruth M. Emmons of the Kings County Light Company, Brooklyn, N. Y.; Miss M. E. Stark, Falls River Gas Works Company, Fall River, Mass.; Mrs. Shank, Illinois Power and Light Company, Chicago; Mrs. J. Peterson, Peoples Gas Light and Coke Company, Chicago; Miss Alice M. Lough, New York and Richmond Gas Company, New York; Mrs. Cecil G. Harvey, Westchester Gas Company, Yonkers, N. Y., and from Canada, Miss Gladys Eaton of the Consumers' Gas Company of Toronto.

A complete meal, composed of roast of lamb, devilled tomatoes, date pudding, cheese straws, Stuyvesant squares, spiced jumbles, and pound cake, is on the program for today. Miss Maye Lovell of the Consolidated Gas Company of New York will be in charge and will be assisted by Mrs. Luella Fisher of the Eriez Stove Company, Cleveland, O., and Mrs. Edith Lloyd of the United Gas Improvement Company of Philadelphia.

American Gas Journal

SIXTY SEVENTH YEAR

Published Weekly by American Gas Light Journal, Inc., 53 Park Place, New York, N. Y.

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ISMAR GINSBERG, Editor

Editorial Offices: Atlantic City, Chalfonte Hotel Booth Telephone, Steel Pier Marine 3760

Registration of A. G. A. Members will be printed in two sections in each daily issue of the American Gas Journal. List of Guests registered can be found in Booth 510-B on Steel Pier.

Section I

Registration up to 2 p. m., Oct. 13th

A

Abbott, Merle E.; Taunton, Mass.; Traymore
Acker, E. R.; Poughkeepsie, N. Y.; Haddon Hall
Ackerman, Richard; Englewood, N. J.; Haddon Hall
Ackroyd, John H.; Bridgeport, Conn.; Mullica
Adams, W. A.; Chicago, Ill.; Ambassador
Ahrens, J. H.; Brooklyn, N. Y.; Traymore
Addicks, Allen D.; Newark, N. J.; Haddon Hall
Africa, Walter M.; Manchester, N. H.; Marl.-Blen.
Allen, Ernest W.; Lynn, Mass.; Traymore
Allen, Jr., Wm. H.; New York, N. Y.; Ambassador
Allison, Walter A.; Philadelphia, Pa.; Chalfonte
Anderson, Mark; Fort Dodge, Iowa; St. Charles
Anderson, Howard B.; Philadelphia, Pa.; Strand
Andreds, C. W.; West Duluth, Minn.; Marl.-Blen.
Ashworth, James; Jersey City, N. J.; Breakers
Aspinwall, Chas. C.; Brooklyn, N. Y.; Breakers
Atwood, Chas. C.; Brooklyn, N. Y.; Traymore
Atwood, Byron H.; Wilmington, Del.; St. Charles

B

Bader, Chas. E.; New York City; Traymore
Bailey, E. M.; Newark, N. J.; Haddon Hall
Bains, 3rd, Geo. B.; Harrisburg, Pa.; Marl.-Blen.
Ball, Samuel; Bay City, Mich; Breakers.
Barlow, Thaddeus Scott; New York City; Chalfonte
Barnes, Cyrus; Boston, Mass.; Traymore
Barnum, D. D.; Boston, Mass.; Traymore
Barry, M. J.; Kansas City, Mo.; Traymore
Barthold, C. A.; Kalamazoo, Mich.; Breakers
Batten, J. W.; Detroit, Mich.; Breakers
Battin, H. S.; Philadelphia, Pa.; Marlborough-Blen.
Baylie, Wm. P.; Philadelphia, Pa.; Seaside
Beckjord, Walter; New York City; Traymore
Beebee, A. M.; Rochester, N. Y.
Beisiegel, John J.; New York City; Breakers
Benedict, C. M.; Des Moines, Is.; Marl.-Blen.
Benedict, David B.; New Brunswick, N. J.; Haddon Hall
Bennett, C. W.; Detroit, Mich.; Breakers
Benson, Blair V.; Jersey City, N. J.; Haddon Hall
Bennett, Chas. E.; Binghamton, N. Y.; Traymore
Berge, Henry T.; New York, N. Y.; Breakers
Berguuann, Andrew; New York, N. Y.; Traymore
Bertolette, N. B.; Bristol, Pa.; Traymore
Bettle, W. H.; Newark, N. J.; Dennis
Bird, V. E.; New London, Conn.; Ritz-Carlton
Black, John; Poughkeepsie, N. Y.; Chalfonte
Blanchfield, John L.; Brooklyn, N. Y.; Haddon Hall
Blowers, Wm. B.; New York City; Dennis
Bonner, H. C.; Knoxville, Tenn.; Ritz-Carlton
Bovee, L. E.; Pittsburgh, Pa.; Ritz-Carlton
Boyd, Albert M.; Philadelphia, Pa.; Marl.-Blen.
Boyer, Edward G.; Norristown, Pa.; Marl.-Blen.
Brady, J. C.; New York, N. Y.; Ambassador
Brady, Edward J.; Philadelphia, Pa.; Marl.-Blen.
Bratton, S. C.; Birmingham, Ala.; Strand
Brewer, J. Ed.; Philadelphia, Pa.; Ambassador
Bridgeworth, Geo. B.; New York City; Breakers
Brock, Louis; Chicago, Ill.; Haddon Hall
Brown, Ralph Lyman; Pittsburgh, Pa.
Brown, Harry W.; Philadelphia, Pa.; Haddon Hall
Brown, M. Elton; Jamaica, N. Y.; Traymore
Bruce, Howard; Baltimore, Md.; Traymore
Brundage, Henry M.; New York, N. Y.; Traymore
Bryans, Henry B.; Norristown, Pa.; Marl.-Blen.
Buckminster, Rollin; Pawtucket, R. I.; Brighton
Bulkley, Warren T.; Danbury, Conn.; Traymore
Burger, Rudolph E.; New York, N. Y.; Traymore
Burckhardt, J. A.; New York City; Traymore
Burdick, R. H.; New York, N. Y.; Shelburne
Burgess, Ward M.; New York, N. Y.; Ritz-Carlton
Burr, A. R.; New Haven, Conn.; Strand
Burrows, Gilbert A.; New York, N. Y.; Traymore

C

Calhoun, Ervin; Philadelphia, Pa.; Morton
Callanan, Wm. J.; Auburn, N. Y.; Brighton
Cameron, Wm. R.; Philadelphia, Pa.; Traymore
Campbell, B. G.; Pontiac, Mich.; Breakers
Caputi, Nicholas G.; Salem, Mass.; Strand
Carney, Miss Norma C.; New York City; Traymore
Carney, J. F.; Utica, N. Y.; Breakers
Carolan, P. C.; Somerville, N. J.; Haddon Hall
Carroll, Chas. E.; New Bedford, Mass.; Chalfonte
Carter, C. E.; Danbury, Conn.; Traymore
Carter, Ralph S.; Malden, Mass.; Traymore
Castle, Wm. E.; Orange, N. J.; Haddon Hall
Chartier, Harold S.; Gloversville, N. Y.; Marl.-Blen.
Chase, Arthur W.; Manchester, N. H.; Marl.-Blen.
Cheeseman, Clyde E.; Brooklyn, N. Y.; St. Charles
Cherry, Arthur C.; Bloomfield, N. J.; Dennis
Chesler, Benj. A.; New York City; Breakers
Chewing, W. L.; Phila., Pa.; Marlborough-Blen.
Chisholm, C. F.; Revere, Mass.; Traymore
Chrisman, C. S.; Phila., Pa.; Marlborough-Blen.
Christman, H. S.; Philadelphia, Pa.; Seaside
Christenson, F.; Guest; New York City; Chalfonte
Clark, Hale A.; Detroit, Mich.; Breakers
Clark, Harlow C.; Newark, N. J.; Haddon Hall.
Clayton, Thos. R.; Providence, R. I.; Haddon Hall
Cliff, Herbert E.; Camden, N. J.; Haddon Hall
Clisham, Ormonde C.; Phila., Pa.; Marl.-Blen.
Cobb, Stephen P.; New York City; Traymore
Cohn, Chas. M.; Baltimore, Md.; Traymore
Coleman, Philip L.; E. Orange, N. J.; Haddon Hall
Collier, Edw. C.; E. St. Louis, Ill.; Breakers
Collier, Chas. A.; Atlanta, Ga.; Marl.-Blen.
Collins, A. B.; Birmingham, Ala.; Marl.-Blen.
Comeau, Lucien; Manchester, N. H.; Dennis
Conklin, Ethel A.; New York City; Traymore
Conner, Jas. F.; Philadelphia, Pa.; Marl.-Blen.
Cooper, Stuart; Charleston, S. C.; Strand
Cooper, Wm. H.; Amsterdam, N. Y.; Ambassador
Corbus, F. G.; Philadelphia, Pa.; Traymore
Cordero, H. C.; Rock Hill, S. C.; Seaside
Corliss, S. T.; Camden, N. J.; Haddon Hall
Cornell, Chas. P.; Brooklyn, N. Y.; Traymore
Corson, A. S.; Philadelphia, Pa.; Shelburne
Cougevan, Thos. M.; Canadaigua, N. Y.; Strand
Craig, Ira L.; Philadelphia, Pa.; Ambassador
Crankshaw, J. Ward; Allentown, Pa.; Shelburne
Crawford, C. M.; Greensboro, N. C.; Ambassador
Crisfield, J. A. P.; Savannah, Ga.; Marl.-Blen.
Crone, Fredk. W.; New York City; Ambassador
Crowell, Hugh R.; New York City; Brighton
Crowley, F. W.; New Bedford, Mass.; Chalfonte
Cummings, Carl H.; Boston, Mass.; Haddon Hall
Cunningham, Thos.; Newburgh, N. Y.; Marl.-Blen.
Culien, Geo. L.; Harrisburg, Pa.; Traymore
Curfman, Floyd G.; New York City; Traymore
Curran, G. W.; Philadelphia, Pa.; Marl.-Blen.
Curran, G. W.; Philadelphia, Pa.
Curtis, S. P.; Philadelphia, Pa.; Ambassador

D

Daniels, Henry; Paughkeepsie, N. Y.; Shelburne
Darlington, F. H.; Glassboro, N. J.; St. Charles
Davies, J. E.; Chicago, Ill.; Ambassador
Davey, G. W.; Long Island City, N. Y.; Haddon Hall
Davis, C. A.; Cohoes, N. Y.; Marlborough-Blen.
Davis, Merrill, N.; Bradford, Pa.; Traymore
Davny, A. F.; Shebaygon, Wis.; Marlborough-Blen.
Day, J. T.; Malden, Mass.; Traymore
Dean, Harry C.; Philadelphia, Pa.; Marl.-Blen.
DeCamp, Stewart B.; Paterson, N. J.; Marl.-Blen.
Deffenbaugh, Momer C.; Rochester, N. Y.; Strand
Delacour, Henry M.; Albany, N. Y.; Ambassador
Dequine, L. E.; Long Branch, N. J.; Ambassador
Dickey, Chas. H.; New York, N. Y.; Seaview Club
Dickey, E. D. V.; Hannibal, Mo.; Traymore
Diehl, Wm. L.; Bronx, N. Y.; Dennis
Dillon, Ed. F.; Newburgh, N. Y.; Seaside
Doering, Wm. A.; Boston, Mass.; Haddon Hall
Doherty, Henry L.; New York, N. Y.; Traymore
Dohrman, Clarence; New York City; Traymore
Dold, G. T.; Burlington, N. J.; Haddon Hall
Dorner, Wm. F.; Phila., Pa.; Marlborough-Blen.
Douglas, J. B.; Philadelphia, Pa.; Marl.-Blen.
Drachbar, Wm. R.; Brooklyn, N. Y.; Haddon Hall
Drake, Francis E.; Lynn, Mass.; Marl.-Blen.
Dudley, A. D.; Syracuse, N. Y.; Marl.-Blen.
Dunn, Frank S.; Albany, N. Y.; Ambassador
Dunne, John J.; New York, N. Y.; Traymore
Durr, Edw. C.; Newark, N. J.; Haddon Hall
Duvall, B. A.; Baltimore, Md.; Haddon Hall

E

Eavsenson, W. K.; Fall River, Mass.; Traymore
Eichengreen, L. B.; Phila., Pa.; Dennis
Elliott, Berney H.; Birmingham, Ala.; Traymore
English, John A.; Jenkintown, Pa.; Morton
English, John A.; Jenkintown, Pa.; Morton
Entwisle, I. H.; Washington, D. C.; Traymore

F

Fancy, R. A.; Watertown, Mass.; Haddon Hall
Fenno, Thos. I.; Salem, Mass.; Strand
Ferdon, Clarence J.; Brooklyn, N. Y.; Traymore
Fieldner, Aron C.; Pittsburgh, Pa.; Albermarle
Fischer, Alfred; Ann Arbor, Mich.; Haddon Hall
Fitzpatrick, Peter J.; New York, N. Y.; Dennis
Fitzgerald, John J.; Holyoke, Mass.; Traymore
Forstall, A. E.; New York City; Haddon Hall
Fox, John S.; Springfield, Mass.; Traymore
Franklin, S. J.; Millville, N. J.; Haddon Hall
Freeman, F. C.; Providence, R. I.; Traymore
Frey, Arthur C.; Worcester, Mass.; Brighton
Freel, R. E.; Clinton, Mass.; Strand
Frick, John A.; Allentown, Pa.; Breakers
Fulweiler, Walter H.; Phila., Pa.; Ambassador
Fuller, R. S.; San Francisco, Calif.; Traymore

G

Gadsden, Philip H.; Phila., Pa.; Marl.-Blen.
Garland, John J.; Brooklyn, N. Y.; Lelande
Gartland, E. P.; Denver, Colo.; Ritz
Geisler, Jr., H. P.; Baton Rouge, La.; Marl.-Blen.
Genay, Thos. B.; Phila., Pa.; Marlborough-Blen.
German, Wm. H.; Harrisburg, Pa.; Marl.-Blen.
Gilbert, Frank T.; New York City; St. Charles
Gilbert, Maxwell F.; Philadelphia, Pa.; Seaside
Gill, W. Herbert; Washington, D. C.; Traymore
Gledhill, A. R.; Brooklyn, N. Y.; Traymore
Goggin, Edw. F.; Dorchester, Mass.; Haddon Hall
Goldsmith, C. E.; Brooklyn, N. Y.; Haddon Hall
Goldsmith, C. S.; Brooklyn, N. Y.; Haddon Hall
Goodman, Patrick; Brooklyn, N. Y.; Ritz-Carlton
Goris, C. Wm.; Fort Wayne, Ind.; Breakers
Gross, A. J.; Chattanooga, Tenn.; Ritz-Carlton
Grace, T. E.; Suffolk, Va.; Chalfonte
Graveley, R. C.; Sag Harbor, N. Y.; Chalfonte
Graves, Clark; Lansing, Mich.; Breakers
Grey, Chester, Atlantic City, N. J.; Strand
Gribbel, W. Griffin; Philadelphia, Pa.; Brighton
Grieve, John; New York City; Traymore
Gruel, Fred. J.; Yonkers, N. Y.; Traymore

H

Hagdn, Dewey A.; Newark, N. J.
Hagginbothom, W. K.; Catskill, N. Y.; St. Charles
Hahner, Chas.; Newark, N. J.; Haddon Hall
Hall, Isaac S.; Boston, Mass.; Chalfonte
Hall, Arthur S.; Springfield, Mass.; Traymore
Hallock, G. L.; Brooklyn, N. Y.; Ambassador
Hall, H. B.; East Braintree, Mass.; Seaside
Halley, Alex. A.; Yonkers, N. Y.; Traymore
Hanlan, James P.; Newark, N. J.; Haddon Hall
Harris, L. Martin; Norristown, N. J.; Morton
Harper, Robt. B.; Chicago, Ill.; Ambassador
Hartzell, A. C.; Greenville, Pa.; St. Charles
Harrison, John Scott; Phila., Pa.; Traymore
Harrison, Geo. L.; New York City; Bringhton
Harmon, Fred C.; Lawrence, Mass.; Marl.-Blen.
Harvey, Lyle C.; Chicago, Ill.; Breakers
Hugh, J. S.; Philadelphia., Pa.; Marl.-Blen.
Heebner, Chas. K.; Phila., Pa.; Marl.-Blen.
Hemminger, G. R.; Philadelphia, Pa.; Marl.-Blen.
Henderson, C. R.; Ann Arbor, Mich.; Haddon Hall
Hendrickson, G. S.; New York, N. Y.; Breakers
Henry, Hall M.; New York City; Marl.-Blen.
Herring, W. E.; Jenkintown, Pa.; Ambassador
Heyser, E. L.; Philadelphia, Pa.; Traymore
Hill, Frank L.; Chicago, Ill.; Traymore
Hill, Herbert E.; Newark, N. J.; Haddon Hall
Hilton, Chas. S.; Pawtucket, R. I.; Marl.-Blen.
Hiddleson, W. A.; Bristol, Tenn.; Ritz-Carlton
Hodgson, Harry E.; Philadelphia, Pa.
Hodges, E. W.; Little Rock, Ark.; Traymore
Hoddick, V. C.; Rochester, N. Y.; Strand
Hoff, John F.; Princeton, N. J.; Knickerbocker
Hoffman, Chas. L.; Reading, Pa.; Strand
Hoffman, Jr., R. C.; New York City; Traymore
Hopper, Thos. B.; Washington, D. C.; Traymore
Hornbostel, Louis; New York, N. Y.; Morton
Howie, Gordon G.; Cambridge, Mass.; Traymore
Howe, Jr., F. G.; Faltham, Mass.; Haddon Hall
Hoy, Chas. W.; Glassboro, N. J.; Traymore
Hubbs, J. H.; Phila., Pa.; Marborough-Blenheim
Hubley, Geo. W.; Louisville, Ky.; Ambassador
Hunter, W. Q.; Crestwood, N. Y.; Traymore
Hutchings, Jas. T.; Phila., Pa.; Marlborough-Blen.

I

Ide, Chas. E.; New York, N. Y.; Ritz-Carlton
Ikena, Fredk J.; Baltimore, Md.; Traymore

J

James, Robt. C.; Newark, N. J.; Haddon Hall
Jankins, G. V.; Henderson, N. C.; Seaside
Jardine, D. W.; Burlington, Vt.; Traymore
Johnson, Adolph C.; New York City; Traymore
Johnson, Ernest; Syracuse, N. Y.; Ambassador
Jones, D. T.; Pottstown, Pa.; Green Gables

Jonese, Ed. Du Bose; Brooklyn, N. Y.; Traymore
Jones, Jacob B.; Bridgeton, N. J.
Jones, Jr., T. N.; Norfolk, Va.; Ambassador

K

Kain, Robt. E.; Ardmore, Pa.; Strand
Karr, Fred; Kansas City, Kan.; Ritz-Carlton
Kebbe, A. L.; New London, Conn.; Ritz-Carlton
Keegan, J. G.; Cheyenne, Wyo.; Ritz-Carlton
Keller, Albert R.; Syracuse, N. Y.; Ambassador
Kellogg, R. M.; New York, N. Y.; Haddon Hall
Kelly, Thos. J.; Fort Wayne, Ind.; Breakers
Kiefer, Fredk.; Wilmington, Del.; St. Charles
Kirkham, Henry P.; Brooklyn, N. Y.; Haddon Hall
Kirchmer, Geo. M.; Brooklyn, N. Y.; Ambassador
Kirk, C. L.; Indianapolis, Ind.; Breakers
Kline, H. C.; Oak Park, Ill.; Traymore
Klumpp, J. B.; Philadelphia, Pa.; Marl.-Blen.
Knauss, John B.; Portsmouth, Ohio; Ambassador
Knowles, Jas. M.; New York City; Brighton
Knowlton, L. E.; Providence, R. I.; Haddon Hall
Kopfer, W. B.; Pueblo, Colo · Ambassador
Kord, Edw. F.; Boston, Mass.; Chalfonte
Kunberger, A. Fredk.; Phila., Pa.; Marl.-Blen.
Kunze, Walter W.; Brooklyn, N. Y.; Haddon Hall
Kurtz, A.; Detroit, Mich.; Breakers

L

Lamson, Jr., W. O.; West Chester, Pa.; Dennis
Lane, W. P.; Philadelphia, Pa.; Seaside
La Row, Leo E.; Utica, N. Y.; Shelburne.
Lasher, C. A.; Kingston, N. Y.; Haddon Hall
Latch, William R.; Brulington, N. J.; Haddon Hall
Lawler, R. H.; Jackson, Michigan; Breakers
Lawler, Edward A.; West New York, N. J.; Haddon Hall
Lawrence, Eugene B.; Brooklyn, N. Y.; Breakers
Learned, Chas. A.; Meriden, Conn.; Haddon Hall
Learned, Harold G.; Middletown, Conn.; Haddon Hall
LeClair, Charles; Peekskill, N. Y.; Dennis
Leonard, William Moeker; Brooklyn, N. Y.; Traymore
Lesley, Robert W.; Philadelphia, Pa.; Shelburne
Leudemann, Albert V.; New York City; Seaside
Levan, Daniel H.; Savannah, Ga.; Marlborough-Blenheim
Lewis, Thomas R.; Quakertown, Pa.; Ritz-Carlton
Lewis, William H.; Chicago, Ill. Ambassador
Lindsay, Robert; New Bedford, Mass.; Chalfonte
Linton, S. E.; Nashville, Tenn.; Ambassador
Littell, C. E.; New Haven, Conn.; Traymore
Little, A. S. B.; Lynbrook, N. Y.; Ambassador
Llewellyn, A. J.; Kingston, Pa.; Marlborough-Blenheim
Long, L. M.; Memphis, Tenn.; Breakers
Lovell, H. A.; Jamaica, L. I., N. Y.; Traymore
Lowell, G. C.; Chicago, Ill.; Ambassador
Lunn, Charles Albert; New York City; Haddon Hall
Luqueer, R. O.; New York City; Ritz-Carlton
Luther, Charles A.; Chicago, Ill.; Ambassador
Lutz, William J.; Newark, N. J.; Breakers
Lydecker, Frederick Ackerman, Newark, N. J.; Dennis
Lyons, B. F.; Kewanee, Ill.; Traymore

M

Mackie, J. W.; Newark, N .J.; Haddon Hall
Macbeth, G. T.; Yonkers, N. Y.; Breakers
Macbeth, A. B.; Los Angeles, Calif.; Traymore
Mahn, Robert B.; New York, N. Y.; Traymore
Malone, M. E.; Denver, Colo.; Ritz-Carlton
Malone, Peter K.; Gloversville, N. Y.; Marlborough-Blenheim
Marshall, Milton; Richmond, Va.; Ritz-Carlton
Martell, W. H.; Austin, Minn.; Knickerbocker
Mason, Sidney; Gloucester City, N. J.; Cottage —Local
Mason, E. R.; Poughkeepsie, N. Y.; Haddon Hall
Maxton, S. A.; Burlington, N. J.; Haddon Hall
Mayers, J. A.; Cumberland, Md.; St. Charles
Mears, F. K.; Philadelphia, Pa.; Seaside
Medcalf, J. Curtis; Baltimore, Mr.; Brighton
Menard, Ralph W.; Boston, Mass.; Chalfonte
Menerey, E. J.; Wilmington, Del.; St. Charles
Merrill, Harry; Tonawanda, N. Y.; Marlborough-Blenheim
Merrifield, Wm.; New York City; Ambassador
Merchant, O. A.; Amsterdam, N. Y.; Marlborough-Blenheim
Merkt, Theodore B. J.; Brooklyn, N. Y.; Traymore
Messenger, J. A.; Philadelphia, Pa.; Marlborough-Blenheim
Miller, E. F.; Merchantville, N. J.
Miller, Wm. A.; Cincinnati, Ohio; Traymore
Miller, R. Harold; Gettysberg, Pa.; Holmhurst
Miller, Thomas David; St. Louis, Mo.; Marlborough-Blenheim
Minta, Jay J.; Phila., Pa.; Marlborough-Blenheim
Morrison, Martin; Flushing, N. Y.; Morton
Moore, Nathaniel S.; Pittsburgh, Pa.; Fredonia
Moore, Lewis; Joliet, Ill.; Marlborough-Blenheim
Morris, Edgar; Washington, D. C.; Strand
Mueller, F. L.; New York City; Dennis
Mullaney, B. J.; Chicago, Ill · Ambassador
Mulholland, Thos. A.; Brooklyn, N. Y.; Traymore
Mullarkey, J. J.; Camden, N. J.; Haddon Hall
Mundor, Charles Francis; Hagerstown, Mr.; Strand
Murfit, W. G.; Newton, Pa.; Seaside
Murphy, Edward J.; Brooklyn, N. Y.; Haddon Hall
Murray, Francis X.; New York City; Ambassador
Murray, Edgar S.; New York, N. Y.; Brighton
Myers, Edward B.; Philadelphia, Pa.; Marlborough-Blenheim
Myrelius, Maurits G.; Phila., Pa.; Marlborough-Blenheim
MacArthur, Angus; Chicago, Ill.; Traymore
MacArtnur, D.; Jersey City, N. J.; Shelburne
McBride, R. S.; Wasnington, D. C.; Dennis
McCabe, J. B.; Dallas, Tex.; Ambassador
MaCarter, Thomas N.; Newark, N. J.; Shelburne
McCarthy, Edward A.; New York City; Traymore
McCartuy, A. P.; Bangor, Me.; Traymore
McComes, James Anderson; Baltimore, Md.; Traymore
McCorkingdale, William J.; Roanoke, Va.; Knickerbocker
McDonald, Lyle; Glen Ridge, N. J.; Haddon Hall
McDonald, Wm. F.; Elmhurst, L. I., N. Y.; Haddon Hall
McEnaney, P. F.; New York City; Traymore
McFadden, J. E.; Dover, N. H.; Canfield Hotel
McGlinchey, Edwin Joyer; Knoxville, Tenn.; Ritz-Carlton
McGovern, James; Taunton, Mass.
McGowan, Henry E.; Brooklyn, N. Y.; Traymore
McGraw, Isaac; New York City; Chalfonte
McGreevy, J. P.; Utica, N. Y.; Breakers
McKearin, John J.; Haverhill, Mass.; Marlborough-Blenheim
McLean, John Jos.; New York City; Traymore
McLean, H. B.; Yonkers, N. Y.; Traymore
McMaster, W. S.; Freeport, Ill.; Ritz-Carlton
McMinn, John E.; Louisville, Ky.; Breakers
McNeice, Robin Douglas; New York, N. J.; Maharba Apts.
McPherson, J. H.; Boston, Mass.; Strand
McQueen, James Russell; Washington D .C.; Traymore

N

Neal, George A.; Phila., Pa.; Ambassador
Nettleton, Charles H.; Derby, Conn.; Traymore
Newberry, F. E.; Belmar, N. J.; Ritz-Carlton
Newman, David M.; New York City; Chalfonte
Nickerson, Henry L. R.; Brooklyn, N. Y.; Traymore
Nicol, Norman C.; New York City; Marlborough-Blenheim
Nightingale, L. G.; Poughkeepsie, N. Y.; Ambassador
Norris, Warren A.; Lebanon, Pa.; Marlborough-Blenheim
Norton, James J.; New York City; St. Charles
Norton, Walter F.; Nashua, N. H.; Haddon Hall

O

O'Brien, William F.; New York City; Traymore
O'Donnell, W. F.; Phila., Pa.; Breakers
O'Donnell, Charles J.; Phila., Pa.; Traymore
Ogden, Kenneth C.; Yonkers, N. Y.; Traymore
Olwine, H. I.; Cohoes, N. Y.; Marlborough-Blenheim
Otto, Stuart; Scranton, Pa.; Raleigh
Paffen, Peter; Boston, Mass.; Traymore

P

Paige, Clifford E.; Brooklyn, N. Y.; Traymore
Palmer, H. C.; Buffalo, N. Y.; Traymore
Parish, William H.; Phila., Pa.; Ambassador
Parker, Joseph Smith, Phila., Pa.; Seaside
Parsons, Floyd W.; New York, N. Y.; Chalfonte
Pease, Luther M.; New Bedford, Mass.; Breakers
Peck, Irving K.; Chicago, Ill.; Altemus
Penden, Hugh L.; New York City; Ambassador
Peffly, I. W.; Long Island City, N. Y.; Chalfonte
Perry, J. A.; Phila., Pa.; Marlborough-Blenheim
Pett, Howard; Jackson, Mich.; Breakers
Peterson, Carl G.; Providence, R. I.; Haddon Hall
Pettey, Raymond A.; New Bedford, Mass.; Breakers
Phillips, C. S.; Phila., Pa.; Morton
Porter, Edward; Phila., Pa.; Marlborough-Blenheim
Porter, R. G.; Chester, Pa.; Ambassador
Post, Alfred P.; Phila., Pa.; Breakers
Powell, A. R.; Chicago, Ill.; Ambassador
Piatt, Jos. W.; Brooklyn, N. Y.; Haddon Hall
Pierce, Thomas D.; Columbus, O.; Traymore
Prezzano, Edw.; Yonkers, N. Y.; Traymore
Priest, George H.; Brockton, Mass.; Ambassador
Price, Charles R.; New Bedford, Mass.; Haddon Hall
Price, Otto; Quincy, Mass.; Haddon Hall
Prichard, Charles R.; Lynn, Mass.; Marlborough-Blenheim
Putman, Eben F.; New Britain, Conn.; Ambassador

Q

Quinn, Joseph F.; Brooklyn, N. Y.; Traymore

R

Raabe, Charles; Astoria, L. I.; Chalfonte
Railing, Wilford F.; Baltimore, Md.; Traymore
Ramsay, Robert E.; Phila., Pa.; Marlborough-Blenheim
Rancke, Louis N.; Washington, D. C.; Traymore
Ransdell, Duncan D.; Wash., D. C.; Traymore
Rastenburg, F. G.; Indianapolis, Ind.; Breakers
Raymond, William N.; New York City; Traymore
Redington, Horace Ray; Pittsburgh, Pa.; Haddon Hall
Reid, William F.; Phila., Pa.; Knickerbocker
Reese, John G.; Baltimore, Md.; Dennis
Reuss, Frederick A.; New York City; Traymore
Reynolds, J. F.; New York, N. Y.; Morton
Richardson, H. Edward; Phila., Pa.; Dennis
Richards, Karl G.; Chicago, Ill.; Traymore
Richmond, Hugh R.; New York City; Traymore
Risley, Charles W.; Jersey City, N. J.; Haddon Hall
Rivenburg, William C.; Phoenixville, Pa.; Brighton
Roberts, J. Eldon; Newark, N. J.; Haddon Hall
Roberts, Geo. L.; Bristol, Conn.; Strand
Roeser, Charles J.; Brooklyn, N. Y.; Marlborough-Blenheim
Rogers, Paul; Cincinnati, O.; Traymore
Rooney, Jos. Francis; New York, N. Y.; Traymore
Rose, Harold J.; Pittsburgh, Pa.; Traymore
Rosenkrans, F. M.; New York City; Ritz-Carlton
Rosenquest, E. H.;New York, N. Y.; Brighton
Ruegenberg, J. M.; Phila., Pa.; Knickerbocker
Rusby, John M.; Phila., Pa.; Marlborough-Blenheim
Ryder, D. R.; Jersey City, N. J.; Haddon Hall
Ryerson, William N.; Phila., Pa.; Marlborough-Blenheim

S

Sanborn, John Avery; Long Island City, N. Y.; Chalfonte
Schachter, M.; New York ,N. Y.; Brighton
Schanze, H. C., Jr.; Ocean City, N. J.
Schauer, Frank F.; Pittsburgh, Pa.; Traymore
Scheer, A. B.; Carbondale, Pa.; Dennis
Schlegel, Carl A.; Phila., Pa.; Traymore
Schmidt, E. H.; New York City; Traymore
Schmidt, F. W.; Jersey City, N. J.; Dennis
Schmidt, G. F.; Chicago, Ill.; Strand
Schobel, Fred A.; Albany, N. Y.; Ambassador
Schonfisch, William Richard; New York, N. Y.; Knickerbocker
Schuck, Conrad, Jr.; East Orange, N. J.; Marlborough-Blenheim
Schutt, Everett V. K.; Kingston, N. Y.; Chalfonte
Schutt, H. S.; Philadelphia, Pa.; Traymore
Schwabe, Walter P.; Thompsonville, Conn.; Marlborough-Blenheim
Scott, John M.; Wilmington, Del.; Dennis
Scranton, George H.; Derby, Conn.; Traymore
Searle, Robert M.; Rochester, N. Y.
Sebald, H. A.; Coldwater, Mich.; Breakers
Selke, A. F.; Newburgh, N. Y.; Marlborough-Blenheim
Seltzer, Leroy W.; Reading, Pr.; Marlborough-Blenheim
Serrill, Wm. J.; Phila., Pa.; Brighton
Seyms, George B.; Phila., Pa.; Marlborough-Blenheim
Shankland, Clarence W.; Ann Arbor, Mich.; Haddon Hall
Shattuck, J. D.; Chester, Pa.; St. Charles
Shellenberger, James M.; Doylestown, Pa.; Haddon Hall
Shanley, Wm. P.; Norwich, Conn.; Knickerbocker
Shepard, Ira C.; Evansville, Ind.; Breakers
Short, Arthur F.; Providence, R. I.; Strand
Simmons, Frank K.; Woonsocket, R. I.; Marlborough-Blenheim
Simmonds, S. E.; Phila., Pa.; Traymore
Skinner, Herbert H.; Poughkeepsie, N. Y.; Haddon Hall
Smart, Burton; Portland, Me.; Haddon Hall
Smith, Arthur A.; West New York, N. J.; Haddon Hall
Smith, Geo. H.; Poughkeepsie, N. Y.; Ambassador
Smith, John Calhoun; Reading, Pa.; Marlborough-Blenheim
Smith, L. C.; Goversville, N. Y.; Marlborough-Blenheim
Smith, Oliver H.; New York City; Dennis
Souder, William D.; Phila., Pa.; Stanton
Spinney, Andrew G.; Portland, Me.; Breakers
Squier, Harold N.; Scranton, Pa.; Haddon Hall
Stagg, John P.; Brooklyn, N. Y.; Chalfonte
Staniford, A. F.; Brooklyn, N. Y.; Marlborough-Blenheim
Staniford, Robert H.; Brooklyn, N. Y.; Marlborough-Blenheim
Stark, F. M.; Poughkeepsie, N. Y.; Seaside
Stark, Marion E.; Fall River, Mass.; Marlborough-Blenheim
Stark, Major W. E.; Cleveland, O.; Marlborough-Blenheim
Sterrett, Wm. G.; Chester, Pa.; Traymore
Stevens, George F.; New York City; Traymore
Stiles, George W.; Portland, Me.; Haddon Hall
Stites, Townsend; Gloucester City, N. J.; Traymore
Stitzer, R. B.; Toledo, O.; Ambassador
Stockton, H. A.; Atlantic Highlands, N. J.; Strand
Stodelmann, Joseph J.; New York City; Traymore
Stone, James L.; Spokane, Wash.; Ritz-Carlton
Strader, Roland H.; New York City; Chalfonte
Strickler, T. J.; Kansas City, Mo.; Ritz-carlton
Sullivan, John J. C.; New York City; Traymore

Sutton, H. A.; Newark, N. J.; Haddon Hall
Sykes, W. C.; Rochester, N. Y.; Marlborough-Blenheim

T

Taggart, Chas. W.; Norwich, Conn.; Knickerbocker
Terry, Jr., H. Warren; Ossining, N. Y.; Marlborough-Blenheim
Terzian, Harutyum G.; Phila., Pa.; Marlborough-Blenheim
Thompson, George W.; New York City; Traymore
Thompson, Robert I.; Raleigh, N. C.; Seaside
Thurston, R. E.; Putnam, Conn.; Ambassador
Tracy, Joseph H.; Brooklyn, N Y.; Breakers
Tudbury, J. L.; Salem, Mass.; Strand
Turi, Frank; Newark, N. J.; Haddon Hall
Tuteur, Irving M.; Chicago, Ill.; Traymore
Umstead, E. S.; Providence, R. I.; Knickerbocker

U

Underhill, Reginald B.; Brooklyn, N. Y.; Haddon Hall

V

Vaiden, John Langhorne; Westfield, N. J.; Brighton
Vivian, W. S.; Chicago, Ill.; Ritz-Carlton
Van Winkle, Lloyd; Montclair, N. J.; Haddon Hall
Vredenburgh, F. W.; Newburgh, N. Y.; Seaside
Verdel, William E.; Fitchburg, Mass.; Traymore

W

Wade, Franklin S.; Los Angeles, Calif.; Traymore
Wade, L. W.; Humboldt, Iowa; Ambassador
Waddington, Chas. W.; Brooklyn, N. Y.; Traymore
Wagner, Laurence E.; Phila., Pa.; Marlborough-Blenheim
Wagner, E. J.; Johnson City, Tenn.; Traymore
Waldron, J. H.; Brooklyn, N. Y.; Haddon Hall
Walsh, E. V.; Hackensack, N. J.; Haddon Hall
Walker, Albert C.; New York City; Fredonia
Waring, George H.; Grand Rapids, Mich.; Dennis
Warner, A. W.; Chester, Pa.; Ambassador
Washer, O. R.; Morristown, N. J.; Haddon Hall
Watson, Burl S.; New York City; Ritz-Carlton
Weaver, Harry O.; New York City; Brighton
Weber, Theodore G.; New York City; Chalfonte
Weber, F. C.; New York, N. Y.; Ritz-Carlton
Weinmeister, C. J.; Atlanta, Ga.; Marlborough-Blenheim
Wells, Fred K.; Boston, Mass.; Knickerbocker
Wellington, Herbert; Brooklyn, N. Y. Traymore
Wells, H. H.; Newark, N. J.; Dennis
Werner, Louis H.; New York City; Brighton
Weymouth, Thomas R.; Buffalo, N. Y.; Traymore
Wieber, George A.; Utica, N. Y.; Shelburne
Wilson, Dustin W.; Orchard Park, N. Y.; Traymore
Wilder, E. L.; Rochester, N. Y.; Strand
Willien, L. J.; Boston, Mass.; Traymore
Williams, C. T.; Sioux City, Iowa; Haddon Hall
Willard, Edward A.; Portland, Me.; Breakers
Wilson, William J.; New York City; Traymore
Wilson, Ralph; Paterson N. J.; Haddon Hall
Williams, L. S.; Harrisburg, Pa.; Marlborough-Blenheim
Windle, Ernest G.; Phila., Pa.; Strand
Winch, Percy Holden; East Orange, N. J.; Breakers
Wiske, Prescott B.; Brooklyn, N. Y.; Traymore
Whetstone, Walter; Phila., Pa.; Traymore
Whipple, Robert H.; Phila., Pa.; Traymore
Whittaker, A. D.; Atlanta, Ga.; Marlborough-Blenheim
White, Wallace A.; Richmond, Va.; Haddon Hall
White, Howard E.; Bridgeport, Conn.; Haddon Hall
Whelpley, James A.; Bloomfield, N. J.; Dennis
Wohrley, J. R.; New York, N. Y.; Ritz-Carlton
Wolff, M. S.; New York, N. Y.; Traymore
Woodring, William G. Beck; Allentown, Pa.; Chalfonte
Wortendyke, I. F.; Janesville, Wis.; Marlborough-Blenheim

Y

Yeomans, B. B.; Rochester, N. Y.; Strand
Young, R. R.; Newark, N. J.; Traymore
Young, Peter; Watertown, N. Y.; Ambassador
Young, Clifford; Wilmington, Del.; St. Charles

Section II

Registration from 2 p. m. to 5 p. m., Oct. 13th

A

Albrecht, G. H.; Baltimore, Md.; St. Charles
Alden, J. D.; Red Bank, N. J.; Ambassador
Allen, G. W.; Boston, Mass.; Traymore
Allen, Jr., C. N.; Orange, N. J.; Haddon Hall
Anklam, R. G.; Crisfield, Md.; Breakers
Annett, Edw. B.; Maplewood, N. J.; Chalfonte
Armel, N.; Chicago, Ill.; Dennis
Atherton, Edgar; Paterson, N. J.; Haddon Hall
Austin, Geo. B.; Newport, R. I.; St. Charles

B

Backer, Adam K.; Baltimore, Md.; St. Charles
Balsam, H. M.; Haverstraw, N. Y.; Breakers
Beal, T. B.; Poughkeepsie, N. Y.; Traymore
Beard, Wm. K.; Philadelphia, Pa.; Marl.-Blen.
Bellamy, Chas. R.; New York City; Shelburne
Bensel, C. L.; Trenton, N. J.; Haddon Hall
Boothby, E. J.; Fall River, Mass.; Traymore
Boyd, Geo. H.; New York, N. Y.; Dennis
Blauvelt, Wm. H.; New York City; Shelburne
Bradley, W. H.; Springfield, Mass.; Traymore
Brandt, A.; Newark, N. J.; Haddon Hall
Bratz, August J.; Summit, N. J.; Haddon Hall
Breese, Fred S.; Montclair, N. J.; Haddon Hall
Brearley, W. R.; Princeton, N. J.; Haddon Hall
Broughton, Harry E.; Jackson, Mich.; Breakers
Brown, A. T.; Newark, N. J.; Marl.-Blen.
Burke, Ed. J.; Chicago, Ill.; Strand

C

Cartwright, Jr., H. R.; New York City; Shelburne
Cary, Logan; Oklahoma City, Okla.; Traymore
Causbrook, Wm. R.; Plainfield, N. J.; Haddon Hall
Chadwell, Wm. H.; Newark, N. J.; Breakers
Charles, L. A.; Nest New York, N. J.; Haddon Hall
Chubb, C. N.; Davenport, Ia.; Traymore
Clark, T. F.; Philadelphia, Pa.; Ambassador
Collins, R. B.; Verona, N. J.; Haddon Hall
Colyer, Arthur D.; Elizabeth, N. J.; Haddon Hall
Conrad, Chas. A.; Philadelphia, Pa.; Brighton
Cooper, F. Warren; Newark, N. J.; Haddon Hall
Covell, Spencer A.; New York, N. Y.; Traymore
Culiver, O. T.; Englewood, N. J.; Haddon Hall
Currey, H. J.; Bound Brook, N. J.; Haddon Hall
Curtis, Harry A.; New Haven, Conn.; Traymore
Cutignol, Mark; Rahway, N. J.; Haddon Hall

D

Dahlstrom, B. P.; Hoboken, N. J.; Haddon Hall
Daugherty, Wm. E.; Chisfield, Md.; Breakers
Davies, E. L.; Far Rockaway, N. Y.; Ambassador
Davis, E. F.; New York City; Craig Hall
Debevoise, Paul; New York City; Marl.-Blen.
Demorest, Prof. D. J.; Columbus, O.; Marl.-Blen.
Dickinson, Walter; Newark, N. J.; Haddon Hall
Dickson, Ross H.; Elizabeth, N. J.; Marl.-Blen.
Dodds, Wm. B.; Jersey City, N. J.; Haddon Hall
Downey, Jas. N.; Camden, N. J.; Dennis
Drewson, John; Pittsburgh, Pa.; Traymore
Dunkak, E. B.; Passaic, N. J.; Haddon Hall
DunHam, R. E.; Berea, O.; Dennis
Dutcher, H. V.; Poughkeepsie, N. Y.; Chalfonte
Eastman, H. L.; New York City; Breakers

E

Eaton, H. M.; Detroit, Mich.; Ambassador
Ellis, Harry; Camden, N. J.; Dennis
Ely, V. A.; New York, N. Y.; Ambassador
Evarts, Jr., D. E.; Jersey City, N. J.; Haddon Hall

F

Farrell, J. L.; Passaic, N. J.; Haddon Hall
Federer, T. P.; Cohoes, N. Y.; Ritz-Carlton
Fischer, Ed. L.; Davenport Iowa; Breakers
Fisher, R. E.; San Francisco, Calif.; Knickerbocker
Ford, H. Stanley; Detroit, Mich.; Traymore
France, Frank; Long Island City; Traymore
Frazer, D. H.; Battle Creek, Mich.; Traymore
Fritz, H. C.; Cleveland, Ohio
Fritz, H. C.; Cleveland, Ohio; Traymore
Fritz, Edwin C.; Cleveland, O.; Traymore
Fulling, John L.; Philadelphia, Pa.; Traymore

G

Gardiner, E. Frank; Chicago, Ill.; Ambassador
Gellert, N. Henry; Philadelphia, Pa.; Traymore
Gillingham, H. D.; Montclair, N. J.; Traymore

H

Haslam, Robt. T.; Cambridge, Mass.; Marl.-Blen.
Hay, S. F.; Newark, N. J.; Traymore
Hayden, W. C.; Long Branch, N. J.; Haddon Hall
Hennig, H. W.; Hoboken, N. J.; Plaza
Hergesheimer, G. M.; Philadelphia, Pa.; Brighton
Hersey, H. S.; Cleveland, O.; Dennis
Honeywell, M. C.; Wabash, Ind.; Ambassador
Hostetter, Jr., Amos B.; East Orange, N. J.; Haddon Hall
Houston, Frank M.; Elmira, N. Y.; Traymore
Howe, Chas. T.; Brooklyn, N. Y.; Marl.-Blen.
Huff, Wilbert J.; Baltimore, Md.; Breakers

J

Johns, W. H.; New Brunswick, N. J.; Haddon Hall
Johnson, B. Kay; East Orange, N. J.; Traymore

K

Keane, F. A.; Jersey City, N. J.; Haddon Hall
Kent, Ed. G.; Hoboken, N. J.; Haddon Hall
Kent, Chas. Z.; West Orange, N. J.; Monticello
Kingsbury, I. C.; New York City; Brighton
Killgore, Jas. N.; Newark, N. J.; Haddon Hall
Knowlton, Robt. H.; Philadelphia, Pa.; Ambassador
Kraemer, John P.; Irvington, N. J.; Haddon Hall

L

Landers, Ray E.; Danbury, Conn.; Ambassador
Lawrence, Jas.; New York, N. Y.; Traymore
Lawlor, Ed. A.; West New York, N. J.; Haddon Hall
Lehnert, Frank J.; Trenton, N. J.; Haddon Hall
Leisen, T. A.; Omaha, Neb.; Breakers
Lightfoot, Jr., J. C.; Philadelphia, Pa.; Seaside
Lohmann, R. E.; Jersey City, N. J.; Haddon Hall
Lynn, Fredk. W.; Newark, N. J.; Haddon Hall
Lyon, B. C.; Belleville, N. J.; Haddon Hall

M

McCaffrey, Geo. E.; Fall River, Mass.; Traymore
McConnell, H. N.; New York City; Sheuburne
McEnaney, P. F.; New York City; Traymore
McKana, Geo. E.; Chicago, Ill.; Ambassador
McKenzie, T. C.; Monroe, Mich.; Ambassador
McKee, Jas.; Brooklyn, N. Y.; Ritz-Carlton
McLane, W. W.; East Orange, N. J.; Haddon Hall
Mason, F. E.; Grand Haven, Mach.; Ambassador
Mayotte, A. J.; Jackson, Mich.; Ambassador
Mead, Jr., L. T.; West Orange, N. J.; Haddon Hall
Mendelson, L. R.; Cleveland, O.; Breakers
Mendez, Frank L.; Chester, Pa.; Ambassador
Miller, W. A.; Cincinnati, Ohio; Traymore
Misser, H. L.; Los Angeles, Calif.; Chalfonte
Moore, P L.; Staten Island, N. Y.; Breakers
Moffat, Fredk.; Weston, Ont., Can.; Marl.-Blen.
Moss, R. L.; Santa Monica, Calif.; Strand
Munroe, Donald; New York City; Traymore
Murphy, J. B.; White Plains, N. Y.; Strand

N

Nickerson, H. L. R.; Brooklyn, N. Y.; Traymore
Norcross, J. A.; New Haven, Conn.; Traymore

O

O'Neill, Wm. P.; Rutherford, N. J.; Haddon Hall
O'Neill, Thos. A.; New York City; Dennis

P

Park, Geo. H.; Reading, Pa.; Marl.-Blen.
Pattinson, R. L.; Chatham, Ont., Can.; Breakers
Phelps, Walter C.; New York, N. Y.; Chalfonte
Piser, Theo. H.; Boston, Mass.; Haddon Hall
Penfield, William McCarthy; East Orange, N. J.; Haddon Hall
Potter, N. H.; Paterson, N. J.; Haddon Hall
Pratt, Stewart Marquand; New York, N. Y.; Haddon Hall
Price, H. B., Jr.; Phila., Pa.; Ambassador
Pruden, Andrew; Rutherford, N. J.; Haddon Hall

R

Reimers, Bernard Frederick; Paterson, N. J.; Chalfonte
Replogle, Lyle E.; Newark, N. J.; Haddon Hall
Rich, Ira B.; Newark, N. J.; Ambassador
Rich, William G.; Providence, R. I.; Traymore
Ritchie, R. J.; Long Branch, N. J.; Knickerbocker
Rodgers, Paul C.; Cincinnati, O.; Traymore
Rodgers, Arthur B.; Norwood, Mass.; Clarendon
Roland, Cornelius F.; New York City; Marlborough-Blenheim
Roth, Paul A.; East Orange, N. J.; Haddon Hall
Rowe, Clyde E.; Jackson, Mich.; Ambassador
Ryan, William Pa.; Lackawanna, N. Y.; Marlborough-Blenheim

S

Schell, Harold W.; Haverhill, Mass.; Marlborough-Blenheim
Schaefer, Oscar; Phila., Pa.; Brighton
Scott, John J.; Lewiston, Me.; Knickerbocker
Seybolt, E.; Portsmouth, N. H.; Ritz-Carlton
Shaughnessy, T. J.; New York City; Brighton
Smith, G. E.; Jersey City, N. J.; Haddon Hall
Smith, John C.; Stapleton, L. I. N. Y.; Haddon Hall
Smith, S.; Geneva, N. Y.; Brighton
Sperr, Jr., Frederick W.; Pittsburgh, Pa.; Traymore
Squarey, E. M.; Ampere, N. J.; Marlborough-Blenheim
Stacey, Wayne; Cincinnati, O.; Traymore
Standerman, Ed. F.; Mount Vernon, N. Y.; Haddon Hall
Steinmetz, Henry P. J.; Camden, N. J.; Haddon Hall
Stephen, Guy E.; Worcester, Mass.; Chalfonte
Stoecker, Louis; Maplewood, N. J.; Haddon Hall
Sutherland, F. G.; New York City; Breakers

T

Theisson, George A.; New York City; Craig Hall
Thompson, Robert J.; San Francisco, Calif.
Tucker, Glenn B.; Rome, N. Y.; Breakers
Tuttle, Fred A.; Newark, N. J.; Haddon Hall

V

Van Brunt, A. J.; Newark, N. J.; Breakers

W

Ward, D. L.; Chicago, Ill.; Traymore
Ward, John T.; Cambridge, Mass.; Marlborough-Blenheim
Washburn, R. D.; Arlington, Mass.; Strand
Wasser, O. E.; Ithaca, N. Y.; Ambassador
Wells, Frederick H.; New York City; Traymore
Wilde, Charles; Chester, Pa.; Marlborough-Blenheim
Willinger, Wm.; Baltimore, Md.; St. Charles
Wilson, C. J.; Glassboro, N. J.; St. Charles

Z

Zindema, A.; Newark, N. J.; Marlborough-Blenheim
Zingg, Julius; Newark, N. J.; Haddon Hall
Zepf, William G.; New York City; Traymore

Relations and Customers *

Report of the sub-committee on the gas company and the telephone

J. M. Roberts

Chairman, The Peoples Gas Light & Coke Company, Chicago, Ill.

AS a man speaks so is he. Never more than when spoken over the telephone are words a reflection of character. It is then when the voice alone must be depended upon to project one's personality across space to the person with whom one is talking, that the choice of words and their careful enunciation become of great importance.

As gas service has become one of the most important commodities of the nation, so has the telephone been featured as one of its most important devices. The telephone is something that has been forced on us by this age of speed and convenience, and it is dominant today as an American institution. It is recognized by our customers as one of the easiest means for communication, therefore it behooves us to consider carefully the contact and develop all that is possible in establishing satisfactory relations with our customers through this medium. It is of outstanding importance as a factor in our customer relationship, for Americans are telephonically the most talkative people in the world.

Many people use the telephone for just what it is physically, an inert mechanical instrument without power to express itself. They do not realize that the telephone has no personality and therefore it must be given expression through the user. The gas company has installed the telephone for the convenience of its customers and for the best interests of its business, therefore every time we use the telephone we should be selling the company's service.

Duty of Employee

If every employee of a public utility company could be made to understand that he, first of all, is selling his service to his company, and that through him the company expects to sell good service to its customers, improved service and better relations with our customers will result.

The selling organization of any company is its most vital and vulnerable spot. Employees taking the various orders required to give customers service, listening to their complaints or grievances, are a real part of the selling organization, for they are constantly selling a very definite, material thing, and that is service, indicating at the same time efficiency and courtesy.

Telephone Equipment

Are our telephone facilities sufficient, not only for our needs but our customers'? Adequate telephone facilities for one company may be woefully inadequate for another.

Is our equipment the best and most suitable that can be procured, and have we consulted and obtained the advice of the telephone engineer regarding our installation and our problems?

Is our telephone staff, including the switchboard operators, properly selected, wisely supervised, and carefully trained, and is this training continuous?

Are the quarters that house our telephone staff all that they should be, considering light, ventilation and comfort?

We have endeavored to visualize these requirements and have tried to present the essentials of good telephone service, having in mind that in the demand for telephone service we should be the masters of the situation.

What is said about groups in large locations applies as a rule to smaller ones; the same principles prevail. The larger companies were given the closer study, only because they appear to have given more attention to detail, or, perhaps, have kept a more detailed record of their surveys and studies.

Selection of Employees

Our obligations as a public utility must be in mind when selecting employees to care properly for our telephone work. These selections require the exercise of consideration and judgment, and should be entrusted to a man who has had broad experience in selecting and directing men.

Two primary sources to supply the personnel are available. The first is outside the organization. The second is from within. The latter is the one best adapted to our purpose and from which the most promising material may be drawn.

Desirable Characteristics

An employee selected from within the organization, who has worked his way up, possesses a background, and a working knowledge of the operating departments. He should be a high school graduate or have an equivalent education. Good health is also a necessary requisite, eyesight and hearing should be normal. Other desirable characteristics are:

1. Good habits, neatness and orderliness.
2. Punctuality and steady attendance.
3. Good temperament.
4. Voice control, full toned and pleasant.
5. Good penmanship.

The desire and effort to do something for the customer should be the predominating qualification of a good telephone order clerk. He should be thoroughly grounded in company policy, have a thorough knowledge of the gas business, possess the qualifications of a first-class salesman and exhibit

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courteous and gentlemanly deportment in the face of all existing and trying conditoins that may arise.

Another desirable qualification is the ability to project himself into the customer's position to understand the situation from the customer's viewpoint, to listen with attention to all that is said, but at the same time to know how and when to break tactfully into a long-winded conversation without giving offense.

Understanding the details and workings of all departments, he should grasp the fundamental idea that, to be successful, he must constantly keep apace with all new situations and continued education should be his desire.

The job holds no place for the grouch, or a person temperamentally inclined. More impatience is manifested over the telephone than in any other means of communication. Your telephone employees should be made to understand this and not allow themselves to be worked up to the same state of mind that the customer is in. They should placate and conciliate the impatient, hurried customer.

Training Employees

The foundation of our training must lead to the development of each individual, thence to the building up of a cohesive, loyal, and effective working force.

The proper training of telephone employees is not only feasible but is in sight as an established practice in most utilities. Management will not long tolerate a condition wherein, for inferior training, a price is paid that is higher than proper training should cost.

Wonderful stories are related in our periodicals and trade journals regarding the intensive training of utility employees that is supposed to be under way. But go into most any city, pick up a telephone, call the gas company's Complaint Department and give the clerk hell about a supposed complaint. What's the answer? You will get hell in return.

And yet some of us are misled into believing that we are properly training our employees. Until smug complacency is superseded by an honest desire to know the facts about our relations with the man in the street, and his reaction to our attitude and policies, and until these facts are known and our employees' attitude changed, little real progress will be made, for the measure of accomplishment in any field of endeavor is determined in the result produced.

Your man behind the telephone must be taught how to think right about his work before he can perform. This is the keystone in any scheme of training. Following this, strict adherence to the most modern telephone practice as advocated by the telephone companies (although not always followed by their employees) for the public is essential. The employee must be trained to give the impression that he is the customer's representative and that his duties are to secure for the customer all the service that the company extends.

Supplemental Training

Supplemental training, coupled with constant supervision, is the price paid for establishing and maintaining proper telephone contact with the public.

Class instruction, of 30-minute periods, two or three times a week, is desirable. In these classes every opportunity should be given employees to express themselves and to discuss their work—such as the correct way to issue inquiry tickets on high bill complaints, how to take these inquiries when the collector is calling, and then the proper way to question customers on leaks and no-gas complaints.

We assume the past, present and probable future history of the company has been outlined. The company's policies have been stated in general terms. The clerk's position and department have been pictured by the use of an organization chart, and that he is fully conversant with the rules and regulations of the organization. To this may be added, from time to time, inspirational talks by executives and by men from other industries who have a real message to put across. Periodical visits to other plants, to see just how the other fellow does it, is another real help.

Participation in Practical Operation

Some companies make a practice of having their order clerks, who have not had previous experience in mechanical work, actually participate in, or at least observe, the practical operations. They are sent out with inspectors who make main surveys, then with the main and service gangs. They accompany the meter setters and shop fitters and see their work. The delivery and adjustment of appliances is also given consideration, and neither is the trick of salesmanship overlooked.

The order clerk is therefore in a position to visualize the requirements of a customer later, particularly if such customer has difficulty in stating his wants clearly. He also knows the time and patience it took to develop a sale and therefore will extend himself, with a view of making the sale stick.

Your order clerks should be taught to be friendly, not familiar; genial, not frivolous; dignified, not distant; sympathetic, not sentimental; calm, not cold. Emotions are catching. Most people react in like manner to the treatment accorded them. If either disgust, impatience or anger are expressed through the telephone, the person at the other end of the line will catch the emotion and reply in the same manner.

Courtesy

Cultivate courtesy. It is due to every customer and it is the duty of the employee to give the customer what the company owes in this respect.

Avoid argument. If the employee answering the call cannot satisfy the customer, the call should be referred to some one higher up. An argument entered into by an employee whose principal duty consists in answering phone calls may hold up other calls. This tends to disturb his poise and may be

reflected in his manner when answering the next call.

Teach your clerks to consider carefully indirect calls, those given through the courtesy of a second person. These calls are most prolific in causing errors as it is hard to get correct information. The person speaking has not the interest in the matter that the principal would have and is resentful when not adroitly questioned.

Supervision

To obtain the desired objective, close supervision is absolutely necessary. It must be a guarded and watchful supervision, and it is also imperative that it should be constant. The man holding the position of supervisor should be selected only because of his qualifications. He should have several years' experience in all branches of the company's work and be conversant with the operating work that will complete an order which has been received from the customer. He also should be well versed in his knowledge of the company's policy and routine. He should keep constantly in touch with all departments of the company so as to be ready at all times to give proper information when appealed to by subordinates or customers.

Your supervisor must be a patient man, with tact and good judgment, who will not give way to the numerous trials which beset him. He must be alert and have executive ability. Personality should be this man's outstanding characteristic. Mentality, ability and poise—these mean personality, and personality must be served. Great qualifications to have one man endowed with, you will say. Perhaps, but he is worth looking for.

Yet, with all the foregoing, he will fail if he has not the ability to impart his knowledge to his subordinates, so that his qualities will be reflected in them. To be eminently successful he must be capable of training new employees, besides keeping the morale of the older ones up to the desired standard.

Arrangements should be made for using any means that are deemed desirable, because of local conditions, so that the supervisor can be in constant touch with incoming calls, frequently listening in on conversation; so that he can be assured the order clerks are carrying out instructions and that they are thoroughly acquainted with the details of the work. He will carefully watch errors, for on investigation we have found that often the same mistakes are repeated by different people in this group. Such errors he will develop, construct and utilize into valuable material for class instruction and discussion.

Accuracy and Legibility

Good service to our customers is the reason for our existence. In order to give good service, good judgment must be exercised in minute details in caring for orders taken over the telephone.

It is advisable to use printed forms and your forms should be alike in their setup, in that the same place should be consistently used for the name, address and other information collected on the form. Customers' names, perhaps addresses and floor locations, should be lettered, as there is great possibility of error in writing this part of the order. All errors result in delayed service to the customer and expense to the company. Errors should be carefully checked and analyzed frequently in order to eliminate friction and delays.

By the use of a printed form, the questions to be answered appear fully and in their proper order and it is not necessary to depend upon the emlpoyee's memory to obtain such information as the telephone number, location of keys, and so on.

Do not use scratch paper and later transmit the information to the regular form, as such copying is a fruitful source of error.

Use of Regular Forms

The information, or order, taken over the telephone should be transmitted to the regular order form by the employee taking the order, where a Telephone and Order Department is maintained, or the work may be done by the Application, Order or other department, if the employee taking the order is used only for taking telephone orders.

If for any reason an order cannot be executed by the inspector because of incorrect information, an error in the street number, and so on, he should telephone the office for further information. This procedure affords an opportunity to correct mistakes without involving the customer in delay. In large situations provisions should be made for a special clerk to handle this business. Remember that a place should be provided on all of your forms for the customer's telephone number.

Continual effort should be made to impress upon the minds of employees the necessity of having all orders legible and accurate, and all orders returned for further information or on which calls are made for further information should be brought to the personal attention of the department head, who can then plan means to eliminate the trouble.

Service to Customers

Service to customers over the telephone begins with a proper listing of the company name, in the telephone directory. In the first place, it should be listed as "Gas Company" under G, and then cross-referenced to the name of the company as alphabetically arranged. This detail has been found useful as a part of good service in some territories, because newcomers are not familiar with the company's name.

Where the company's name is alphabetically listed, there should be as few separate telephones as possible. A number of them are confusing, unless the functions of the service departments as indicated by the different telephone numbers are plainly and nontechnically set forth. Also there should be listed the telephone number, if a different one, that provides for service nights and holidays, although this is a practice deemed undesirable. Some companies advertise an emergency number, we think, too prominently. This may lead to the conclusion that there

is an element of danger in the use of gas, which may be harmful to the industry; furthermore, customers may use this number when it is absolutely unnecessary to do so.

Tracing the call further, the usual answer "Gas Company," or preferably the company's name, should be given by the switchboard operator. Then only enough inquiry to ascertain the nature of the caller's business, to connect him to the proper extension. It requires extreme tact and a knowledge of the company's business for the switchboard operator to obtain this information without compelling the caller to relate the whole story if an order table is not a part of your equipment.

Prompt Answer of Telephone

All telephones should be answered promptly as the caller is very often impatient, and seconds that pass while tiresomely holding a receiver to the ear seem to him like minutes. In event that the one who answers the telephone cannot satisfy the call, or if the call should be placed on the wrong extension, the question then arises, Shall the inquiry be temporarily answered, and the information required given later, or shall it be transferred? Shunting of calls should be reduced to a minimum, and only when the employee to whom the call is referred is made familiar with the story the customer has related.

In the smaller companies this can easily be done by extension telephones and a buzzer system. A code of buzzers between the two telephones would enable either of the employees to call the other to the telephone and listen in on the conversation. Thus the burden of the call would gradually be shifted from one employee to the other, instead of being imposed on the customer.

Give Accurate Information

The customer deserves accurate information. This can be accomplished only by having at hand a record of the progress of any work in course of completion, or knowing a schedule under which new work may be guaranteed for completion. Work Completion Schedules prove very satisfactory in some companies.

Your peaks are known, and by judicious advertising you can obtain the co-operation of your customers to level these peaks, particularly in the moving seasons.

The elements that should be taken for granted in giving service to the customers over the telephone are those fundamentals of tact, courtesy and simplicity, with a vocabulary unhampered by set or stock answers and phrases, and all of this built upon a knowledge of the functions of the departments, of the policies of the company, and a human desire to serve.

Rules and systems are necessary in a business organization, but do not make them too stringent or tight. Those informed agree that the best rule is one that has the best exceptions and the rule must not dominate, when the best results are desired.

Standards in Customer Relations

Report of sub-committee

Chairman, Consolidated Gas, Electric Light & Power Company, Baltimore, Md.

YOUR committee has analyzed the subject assigned to it, and decided that it would be impractical to attempt to cover the entire field. It has therefore selected several subjects that appear to require the attention of the industry at the present time, leaving such other data as has been accumulated for consideration of any future committee.

In presenting this report we have purposely avoided going into a long statement of details, having in mind that what the association wants is facts. While the committee is not unanimous as to the proper methods and policies to be followed in the several subjects presented, it is fair to assume that the same difference of opinion will be held by other company representatives. It is only through a full and frank discussion on the convention floor that we can hope to secure the greatest benefit, possibly leading to a unified program for adoption.

Assume Customer Is Right

A canvass of the committee members indicates that they all conduct public relations on this basis, but in discussing individual practices there is a wide difference as to how far we should go in actually applying this policy. It is especially difficult to apply this

principle to a complaint of a high bill, where the statement of use is at variance with the registration of the meter. Even in such cases, however, we should approach the case with this belief in mind, thereby securing for each customer the individual treatment of his complaint. Each investigation should begin with this assumption and continue until the facts show otherwise. Never permit a customer to place himself in the position of having made a statement of the facts that he can not withdraw from gracefully, without a loss of self respect.

This committee can not recommend a standard, but does stress the value of individual treatment of each customer and the absolute elimination of any tendency to apply a routine method of handling the situation. We may succeed in collecting our "pound of flesh," but it may cost us dearly at some future time.

Complaints Not Justified—Shall Adjustment Be Made?

There is no unity of opinion as to the practice to be followed. Presupposing that all the facts have been carefully weighed and there is no justification for an allowance, we should not arbitrarily refuse an adjustment, as if we are to accept the basis that "The Customer is Right," we should be able to make a satisfactory compromise. Success in collecting for the number of cubic feet of gas registered on the meter is not the only yard stick in measuring a company's success.

Policy on Allowances

To enable a clearer analysis, we have divided this subject into several parts:

(a) Allowance Due to Fast Meters

There appears to be no standard practice in handling this class of complaint, member companies reporting that adjustments are made anywhere from two months back to the date meter was installed. The opinion of this committee is that a standard practice of allowance for the full percentage of error, from the date of test of the meter for a period not exceeding four months past meets the requirements of the customer and the company.

(b) Allowance Due to Leaks in Company's Equipment

When leaks in meters or in meter connections are reported by a customer, and the conditions complained of is found to exist, a liberal policy of adjustment should be followed. It is difficult to admit that the company's equipment was leaking and at the same time endeavor to convince the customer that the registration of his meter was not affected thereby. He points to the fact that he smelled gas and is convinced that any increase in his bill was due to escaping gas.

(c) Allowance for Waste of Gas Through Automatic Appliances

A similar policy is recommended where it is found that the customer thinks that he had turned off the gas supply to an automatic device, but through error only turned off the pilot, leaving the main burner on, which permitted gas to escape through the vent into the chimney. Such waste is usually not discovered by the customer until he receives his bill.

(d) Allowances on First and Final Bills

It is a known fact that a certain portion of the population move over night and that an unauthorized use of gas while the account is "inactive," may occur where meters are left on vacant premises. If the premises are occupied only between meter reading dates, the gas so used and registered may be charged to the new or old tenant, should they delay notifying the company of the date of their occupancy or the date of their vacating. Claims are frequently made that notice was given the company to turn off the service, of which there is no record. Proper consideration of the facts may often warrant a nominal adjustment to satisfy the customer.

(e) Allowances on Charges for Repairs, Etc.

Disputed charges for work done by the Fitting Department in relieving stoppages, trapped house pipes, etc., where the work is beyond the gratuitous service of the company, should be subject to adjustment. This work often borders on the line of gratuitous service and the relief granted is often the means of avoiding subsequent complaints, hence the recommendation for a broad policy.

(f) Merchandise Allowances on Disputed Charges

While all companies are not in the merchandise business, we could not resist including it in our classification. It is in this line where we are in competition with other dealers, and where a liberal policy in terms, exchanges and adjustments is forced upon us. The experience gained in merchandising in some companies has been very beneficial in creating a new viewpoint for the conducting of the gas portion of our business.

Decide Credit After Gas Is Turned On

As the majority of our customers are honest and are entitled to service with the least posisble delay, we recommend that gas be turned on without waiting for credit rating to be applied. Where investigation discloses customer is not entitled to credit, we should secure a deposit promptly or refuse longer to supply the gas.

We do not recommend accepting a guarantor, as when called upon to make good it invariably leads to a disturbance of good public relations.

Deposits

There is the widest difference in the policy of companies requiring deposits; some going so far as to insist upon a deposit being made by every customer; one member company pointing out that it

made no difference whether the applicant was the Standard Oil Company, the Pennsylvania Railroad or a day laborer, the deposit was required.

The experience of a number of companies demonstrates that deposits should only be required where the risk is known to be financially irresponsible or where there is no evidence of stability in occupation. Some companies do not require a deposit under any circumstances.

Your committee feels that the elimination of deposits except in certain classes of business, which are known to be unstable, is a step in the building of public good will and more than pays, even though there may be a slight increase in uncollectable accounts. This increase has not followed in those companies where the more liberal policy is in effect.

Credit is the basis of ordinary business intercourse —why not in the gas industry?

Quicker Methods of Refunding Deposits

The idea of entirely protecting the company from loss is frequently the cause of an unreasonable delay in returning deposits; losing sight of the fact that the customer must pay his money in advance before receiving the service, whereas he often waits a week after the service is discontinued before his money is returned to him. Customers resent this policy and at times refer to it in comparison with methods in other lines of business.

Your committee feels that every effort should be made to shorten the time of returning deposit and that reimbursements to the customer should be made immediately after the reading of the meter, even though there may be a chance that a small unpaid amount be overlooked. Where parties are leaving the city, the usual billing routine can be sidetracked and the account worked "Special" so as to close the transaction to the satisfaction of the customer.

Applications for Service

(a) What Records Are Necessary at the Counter?

A large number of companies feel that they must refer to a customer's card file before they accept an application for service. This means holding the applicant at the counter until the necessary records are referred to. With the increase in the number of applications accepted by phone, this practice must necessarily be discontinued or at least delayed. It therefore seems desirable to eliminate the premises card file behind the application counter and permit applications to be taken on the customer's statement of conditions on his premises. Orders on the operating departments which are found to be incorrect can be corrected by those departments and the installation made accordingly. As this occurs in not more than from 5 to 10 per cent of the cases, 90 per cent of the orders would be completed in less time than is now the case.

(b) Standard Time to Complete Orders

The first point of contact between the public and the company is through the Application Department. Here we should ascertain the customer's needs and every effort made by the company's organization to meet the requirements of prompt service. Your committee feels that all orders to turn on or turn off service or to set a meter should be completed the same day if requested by the customer. It has been demonstrated that it is practical and undoubtedly of much value as a good will builder to have a standard production in service connections which will be lived up to.

Standard Practice Concerning Cut-Out for Non-payment

It is desirable to classify all customers according to their credit rating to avoid any routine method applying to all alike. First notices calling attention to the account being overdue should be sent to all customers except those classified as habitually delinquent. Final notices should be sent to such customers only after a reasonable collection effort has been made, and such notices should be approved by the head of the Collection Department. He should be thoroughly familiar with the financial and social roster of the city. Those classed as regular delinquents should be vigorously dealt with by the issue of final notices as soon as account is in arrears. (It does not help public relations to grant such delinquents any extension of credit.) A definite expiration date should appear in such notice and on the day following the expiration date, a final effort to collect the bill or turn off the service should be made.

The committee questions the desirability of employing the subterfuge found necessary at times of the final collector entering the premises in the guise of a meter reader and turning off the gas. While judgment must be used, it is better to state our intentions openly, that if the account is not paid, we will be compelled to discontinue the service on the outside of the premises.

Prompt Refund of Twice Paid or Overpaid Bills

For the same reason that we should refund deposits promptly, we should immediately refund any twice paid or overpaid amount. Bills are due and payable by given dates and in a number of companies penalties are added if payment is received after the discount date, consequently the impression must not prevail that the company is tardy in its refund of the customer's money. The attitude of the employee in receiving a request for such refunds is important, as tending to create confidence or doubt in the mind of the customer. Such refunds should be paid in cash upon nominal identification.

It should be the duty of the Billing Department to issue automatically a check in those classes under discussion. Promptness in such cases would often anticipate the customer's call. In a number of companies these refund checks must pass through the various accounting or auditing departments before

being issued. This accounting should be done after the check is in the hands of the customer.

Why Only Men Trained in Company's Practice Should Be Used as Outside Service Salesmen

While the importance of this has been stressed in previous reports and has been the subject of a number of articles by various managers of utilities, we feel that its importance will lose nothing by repetition.

Your committee feels that these men should be selected with great care and trained adequately to meet the customer on his own threshold. Preparation equal to that of the technical man, in his line, must be given to the personnel side of our work, if we are to meet logically the various situations which arise during the day. We realize that upon a visit to the office the customer may not assert the full force of his personality in dealing with our employee. When he is seen in his own home, however, the conditions are reversed and the demands to satisfy become more exacting. It is important that these men realize that in the handling of a complaint they must bring out all that is in the customer's mind as it answers no good purpose to dispose of the complaint temporarily. These men must be broad-minded, liberal and willing to assume the responsibility for independent action and thought.

The detail or extent of this training is not attempted here, except to say that the position of outside service salesman should be reached through consecutive steps in the company's organization, the policies of the company being thoroughly absorbed in transit.

General

Your committee feels that advantage should be taken of every opportunity to secure public good will and any practice that is a convenience to the public should be carefully considered. We wish to call attention to a plan recently adopted by one of the companies, which eliminates one source of unfavorable comment.

A locked box similar to a mail box is installed at the entrance to the offices during the hours the offices are closed. A framed glass sign over the box reads "For your Convenience—you may pay your bill after the office is closed by following instructions on the envelope." At the bottom of the locked box is a receptacle containing a number of manila envelopes on which is printed "Place the exact amount of your bill in the envelope together with the bill. Seal envelope and deposit it in the box. Receipt will be mailed you."

Each day immediately after the office is closed, there are always a number of people who arrive just too late to pay their bills; there are also a number of people who must be at their place of employment at the time the office opens. To pay their bills they must wait until the company's office opens, which makes them late at their place of employment, causing them to be either reprimanded or "start the day wrong."

It is felt that each discount saved the customer by this plan is a contribution to the fund of good will.

This company has also placed a locked box in a prominent position in front of its rows of tellers' cages, with a sign attached, explaining that instead of waiting in line to pay bill to the teller, those making payment in check may place it with their bill in an envelope (a supply of which is conveniently located to the box) and deposit it in the box.

We are all familiar with the long line before tellers' cages on a busy day. This plan tends to reduce this number and at the same time reduces the unproductive time of a customer. Each check so deposited also saves the time of the teller.

Errors in Piping Which Result in Crossed Meters

This is an ever recurring problem in the larger cities, especially where buildings are converted into apartments. It is difficult to trace the responsibility for such errors. The fault may be with a careless plumber or pipe fitter or with the company. Your committee urges that a careful investigation be made by the outside service salesmen whenever it is believed that uses beyond that of the customer are affecting the amount of the bill.

When such conditions are found, the customers affected should be informed. If the error is traceable to the company's fitters, the company should acknowledge responsibility, credit the one customer with the overcharge and debit the other for gas consumed, but registered on the wrong meter.

The latter creates a problem sometimes difficult to adjust, as there may be a refusal to pay the difference resulting from the correction of the error. These should be adjusted liberally by recognizing the company's position as a contributor to the error in billing.

When it is apparent, however, that the mistake was made by other than the company's employees, the customers should be assisted in arriving at an adjustment between them, and the records should be corrected, but no further participation by the company should take place.

Your committee has heard the expression—"It costs too much to follow such practices." When you consider that Public Service Commissions recognize in the rate the difference between a satisfied public and a dissatisfied one, the cost of such a program is justified.

"Public Service is a Public Trust."

Accident Prevention *

Report of the 1925 committee

C. B. Scott
Chairman, Bureau of Safety, Chicago, Ill.

ACCIDENT prevention has become a very definite activity of the American Gas Association. In carrying out its program each year your Accident Prevention Committee earnestly keeps in mind its responsibility to serve the best interests of your membership by giving such assistance as will enable the gas industry to fully meet its duty in protecting employees and the public against possible casualties and property damage. In meeting this responsibility there is no conflict between our duty to the industry, to its employees and to the public. Each has an interest in safety and each group has manifested that mutual interest by most commendable co-operation with the committee.

Serious and important employment hazards or public hazards do not characterize the gas industry. True, the possibilities of explosions and gas poisoning exist, but they cannot be classed as hazards peculiar to the industry. They become hazards or dangers only under circumstances when reasonable caution is not exercised. Heat, light, power, fire, water and gas are necessities of civilization. These and many others which serve mankind's requirements must be properly handled and used, else they may cause injury or damage.

The real and difficult task in accident prevention is to inculcate into the minds of employees and the public such reasonable and common sense caution as is necessary to properly serve the common interests of business and society. Some one has said, "The most potent influence for safety will be the awakening of the public conscience to the criminality of carelessness." Our efforts have been largely directed toward some such end by promulgating and emphasizing the urgent need for carefulness when and where care is essential.

Three Separate Agencies

In performing these duties, this committee has been brought into contact with three separate agencies with which it has had to deal and whose assistance has made its achievements possible. The headquarters staff of the association has kept in close touch with the committee's work and has kept it informed of the policies and requirements of the gas industry.

These policies and requirements we have tried to meet and in this we have received much assistance through the counsel of the executive officers and their staff. The second agency or group upon which we have had to rely is the membership of the association. To these we have gone for such information and experience as was required in making up our admonitions and recommendations. These members have very freely and very willingly responded to our requests. They have not only helped us in this way, but to a greater extent by carrying out the recommendations which have from time to time been made in committee reports. This disposition to support the committee by word and deed is much appreciated and encourages us in the continuation of our work. During the year we have also been brought into contact with other public service and industrial organizations having a mutual interest in our problems and in touch with other safety organizations such as the National Safety Council and its locals which have a particular interest in reaching the public who use the product of your plants and the streets upon which your equipment is located. From all of these organizations we have received the most hearty support and they have welcomed every opportunity to advance our purposes for a better informed and more careful public. The result of these endeavors and the wide influence of these co-operating agencies is, we believe, bringing about a gradual improvement in the conditions and practices which confronted us a few years ago and consequently more favorable prospect for success in our future work.

Recommendations

Considering the widely diversified geographic locations of the properties represented by the membership, the difference in size and construction of plants, the many ordinances and other conditions and circumstances affecting operation and distribution, it is impossible to make definite recommendations which may in all cases be literally followed. In the face of such conditions it may be necessary to modify specific recommendations to meet existing local requirements. This is particularly true with reference to certain installations and methods of operation and utilization. It is not intended that all of the pronouncements of this committee are to be considered as standards, but rather that they are to be followed subject to such modifications as may be necessary in certain locations. Many parts of the reports of the Accident Prevention Committee should be used as texts from which information may be obtained which will be helpful in solving the particular problem involved.

Selection of Employees

We would again emphasize the importance of a careful selection, instruction, training and supervision of employees. There is no more important factor in accident prevention than a close observance of this procedure and we very earnestly recommend those parts of this report which deal with various phases of this subject.

It is now very generally appreciated that effective accident prevention by public utilities is reflected in better employment and public relations. When properly carried on, it brings the management and the employees into frequent contact and results in a better understanding between them. It gives the public an opportunity to know the requirements and purposes of the utility and establishes a

*To be delivered at the Wednesday General Session of the A. G. A. Convention, Atlantic City, N. J., October 14, 1925.

favorable interest in these matters in the minds of the public. For these reasons and the others having to do with efficiency and economy, no member company can afford to disregard the opportunity to make accident prevention a distinct part of operation and of public policy.

Resuscitation

The value of the work which was done by the association's Resuscitation Commission and the stimulus which has been given to resuscitation work by the American Gas Association Meritorious Service and McCarter medals, together with the more widespread interest in resuscitation by other public utility organizations and the general public, has indicated to the committee the wisdom of the establishment of a permanent joint commission on resuscitation, sponsored and financed by the American Gas Association, the National Electric Light Association and the National Safety Council, to keep abreast of resuscitation developments and advise these and other organizations as to the best methods of resuscitation which may be developed from time to time. To this end negotiations are now under way whereby the three organizations mentioned will investigate the necessity for such a commission as recommended by this committee.

Resuscitation Booklet

Bearing in mind that many important companies of the association operate both gas and electric properties the need for a joint booklet on resuscitation which will be adaptable to their needs is evident. With the further definite knowledge that other national organizations are teaching resuscitation by the Schafer or Prone Pressure Method and that each has some minor variations in technic, it has seemed wise to prepare a standard text on this subject and active negotiations are now under way by the American Gas Association, American Electric Railway Association, American Medical Association, American Railway Association, American Red Cross, National Electric Light Association, National Safety Council, U. S. Bureau of Mines and the U. S. Department of Public Health to this end. It is hoped that the same will be issued in the near future and will, when issued, promote the general adoption of what is now recognized to be the one best method of resuscitation.

Bulletins

This committee has reviewed and made important changes in the National Safety Council's proposed pamphlet on the "Safe Use of Gas in the Home," which has been for some time in the process of preparation. As the approval of this pamphlet by the association must come from the Executive Board, the pamphlet is referred to that body for action.

Conclusions

If this report is to serve its purpose, it must receive proper publicity and careful consideration. It is recommended that copies of it be placed in the hands of all executives and employees who have the opportunity to transmit the recommendations to those who may, because of lack of information or care, be subject to injury. All superintendents, foremen and others vested with supervisory duties should be provided with copies and wherever advisable or conducive to safer operation, the recommendations herein should be carefully observed.

It is further recommended that prior reports of this committee be secured from headquarters and that it be made a part of the duty of the company employee in charge of accident prevention to examine them, not only for the specific information which they contain, which in many cases can be immediately applied, but in the interest of general education in this subject.

Accident Prevention, to be effective, must be a continuous part of operation.

DETAIL REPORT NO. 1
STATISTICS OF ASPHYXIATION CASES

The Statistical Committee has continued the collection of statistics of asphyxiation cases and presents in Detail Report No. 1 a fairly comprehensive summary which is indicative of actual conditions. This shows among other things the need for more accurate publicity to distinguish between suicidal and other cases, and a more careful selection and care of gas consuming appliances.

Number of Companies Reporting from States Listed

Arkansas	2
California	2
Colorado	1
Connecticut	3
Florida	1
Georgia	1
Illinois	6
Indiana	5
Iowa	5
Kansas	1
Kentucky	1
Louisiana	2
Maryland	1
Massachusetts	12
Michigan	2
Minnesota	2
Mississippi	1
Missouri	5
Montana	1
Nebraska	1
New Jersey	6
New York	14
Ohio	4
Oklahoma	2
Pennsylvania	7
Rhode Island	3
South Carolina	1
South Dakota	1
Tennessee	2
Texas	1
Utah	1
Vermont	3
Virginia	1
Washington	3
West Virginia	1
Wisconsin	1
Wyoming	1
Total Companies	107
States represented	37

ANALYSIS OF ACCIDENTS—MANUFACTURED GAS
June, 1924, to June, 1925

	Main	Services	Meters and Connections	House Piping	Fixtures	Tubing	Ranges and Hot Plates	Tank Heaters	Auto. and Inst. Water Heaters	Space Heaters	Misc. Domestic Appliances	Industrial Appliances	Cannot Classify—Inside	Cannot Classify—Outside	No Information Given	Total No. of Cases	No. of Persons Involved	Property Damage
Employees—Unburned Gas																		
Setting Meter without shutting off the gas			2—2													2	2	
Employee should either have worn gas mask or worked shorter intervals	15—23	5—5											3—3			23	31	
Using defective material	1—3	2—2														3	5	
Carelessness or disobedience of Company Rules	1—1	1—2		1—1												3	4	
Tapping Machine was not made tight to pipe	2—2															2	2	
Accidents that could not have been prevented—Such as changing purifier boxes, pumping drips, pumping services, etc	5—5	2—2	1—1										9—9			17	17	
Cause of accident not known or indicated on report	4—7	2—2	1—1				1—1						8—10	1—1	2—3	19	25	
Total—Employees—Unburned Gas	28—41	12—13	4—4	1—1			1—1						20—22	1—1	2—3	69	86	
Public—Unburned Gas																		
Inferior or defective material or appliance needed adjustment or cleaning	1—1	1—2	3—4	1—1	19—27	17—27	10—13		1—1				5—11			58	87	
Gas accidentally turned on and not lighted					76—93		68—76	2—3	1—1	24—29	1—1		1—1			173	204	
Leak in joint, split or broken pipe or fitting	84—464	25—75	46—66	15—23	7—8		3—4		2—2	1—1						184	645	
	3	2	2															7
Tubing accidentally disconnected					4—7		4—8			7—9						15	24	
Installations, adjustments or repairs by inexperienced persons or careless employees		5—6	16—19	18—25			5—6		1—1	3—3						48	60	
		2																2
Cause of accident not known or indicated on report					1—1		3—3	1—3	1—1	2—2			1—1		16—16	25	27	
Total—Public—Unburned Gas	85—465	31—83	65—89	34—49	107-136	17—27	93—110	3—6	6—6	37—44	1—1		7—13		16—16	503	1,047	
	3	4	2															9
Suicides and Attempts																		
Suicides				1—1	61—62	45—46	58—64	1—1	3—4	6—6					118—118	293	301	
Attempted suicides					21—24	15—15	24—24	1—1		2—2					85—85	148	151	
Total—Suicides and Attempts				1—1	82—86	60—60	82—88	2—2	3—4	8—8					203—203	441	452	

ANALYSIS OF ACCIDENTS—MANUFACTURED GAS—*Continued* June, 1924, to June, 1925

	Main	*Services*	*Meters and Connections*	*House Piping*	*Fixtures*	*Tubing*	*Ranges and Hot Plates*	*Tank Heaters*	*Auto. and Inst. Water Heaters*	*Space Heaters*	*Misc. Domestic Appliances*	*Industrial Appliances*	*Cannot Classify—Inside*	*Cannot Classify—Outside*	*No Information Given*	*Total No. of Cases*	*No. of Persons Involved*	*Property Damage*
Public—Fumes from Burned Gas																		
No flue and poor or no ventilation								13—31	16—35	10—15						39	81	
Improper installation								1—1	2—2							3	3	
Flue or chimney stopped up								1—2	2—12	1—2			1—4			5	20	
Appliance out of adjustment and no flue							2—4		12—19			1—1				15	24	
Worn-out appliance										1—1						1	1	
Cause of accident not known or not indicated on report							2—4	2—2	3—4	4—4	1—2	3—4				15	20	
Total—Flue Gases							4—8	17—36	35—72	16—22	1—2	4—5	1—4			**78**	**149**	
Public—Explosions																		
Gas is turned on and not lighted —later party tries to light and accumulated gas explodes							42—42 4	5—5	13—13 2			2—2	1—1			63	63	6
Looking for gas leak with flame		2—4 1	3—1 2	4—4 1			1—1 1		1—1							11	11	5
Electric short circuit & gas leak					1—0 1											1	0	1
Flue stopped up caused explosion							2—2									2	2	
Carelessness of electricians—man lit match in room where electricians had left gas pipe open				1—1												1	1	
Unknown or not indicated on report	4—8		1—1				3—3		1—1			1—1				10	14	
Total—Public Explosions	4—8	2—4 1	4—2 2	5—5 1	1—0 1		48—48 5	5—5	15—15 2			3—3	1—1			88	91	12
Employees—Explosions																		
Explosions caused by sparks from tools	1—1		1—1											1—7		3	9	
Carelessness with flame		2—2														2	2	
No flue connected								1—1								1	1	
Looking for leak with flame			1—1													1	1	
Trying to light oven, full of gas							1—1									1	1	
Total—Employees Explosions	1—1	2—2	2—2				1—1	1—1						1—7		8	14	
Public—burned—clothing ignited by gas flame							1—1			2—2	1—1					4	4	
Totals	118—515 3	47—102 5	75—97 4	41—56 1	190—222 1	77—87	230—257 5	28—50	59—97 2	63—76	3—4	7—8	29—40	2—8	221—221	1,191	1,843	21

First Figure=Number of Accidents
Second Figure=Number of Persons involved
Third Figure=Number of Property Damage Cases

Distribution *

Report of 1925 committee

H. E. Bates

DEPTH AND GRADES FOR MAIN INSTALLATION

Question No. 12. "What do you consider the minimum depth of cover for main installations?"
Question No. 13. "Should mains be laid below frost?"
Question No. 17. "What is the proper grade to allow on main installations?"

Replies to question No. 12 were received from 35 companies, as follows:

2	companies reporting	4'6"
1	company reporting	4'
7	companies reporting	3'6"
17	" "	3'
5	" "	2'6"
1	company reporting	2'
1	" "	1'8"
1	" "	1'6"

The answers to this question indicate that it is the general practice throughout the country to lay manufactured gas mains with a minimum depth of cover from 30" to 42", depth undoubtedly being governed by local conditions, such as water, sewer, electric duct laterals, and paving specifications, the suburban sections most generally following standard practices of the adjacent city.

Replies to question No. 13 were received from 35 companies, as follows:

18 companies reporting—Yes.
4 companies reporting—Average Frost Line.
9 companies reporting—No.
3 companies reporting—No Frost.
1 company reporting—Depends on conditions.

While there seems to be a wide variation of opinion on this question, we believe it is safe to assume that all companies would lay gas mains below the average frost line in sizes less than 8", providing the depth of cover was not excessive, if for no other reason than to protect the services, providing it be a low pressure district main.

Replies were received from 35 companies, to question No. 7, as follows:

1 company reporting 2" to 12'.
1 " " 1" to 12'.
3 companies reporting ¾" to 12'.
8 " " ½" to 12'.
8 " " ¼" to 12'.
3 " " ⅛" to 12'.
1 company reporting 1/16" to 12'.
1 " " 1/32" to 12'.
2 companies reporting—Slight bubble as shown on spirit level.
1 company reporting—Just sufficient to drain main.
2 companies reporting—Any grade that is continuous.
1 company reporting—If main is not below frost line, provisions must be made to drain rapidly.
1 company reporting—Conditions determine this.
1 company reporting—With the hills in our community we do not have to worry about grades.
1 company reporting—Nearly flat.

There seems to be a very wide variation of opinion as to the main grade allowable for gas main installations. Local conditions, such as underground construction, in some cases compel us to change practices adopted as standard, but there is no reason why a standard minimum main grade should not be adopted and carried out where possible. As you will note from the answers received, we have a variation from 1/32" to 2" in 12 ft. In both cases they are the extremes. There is no question that the more grade given our main, the less trouble we can expect, as mains laid with a good grade will drain the condensate very quickly and especially where the condensate is heavy, which invariably happens close to the works. There are certain conditions that require several lengths of pipe to be laid nearly level to pass some obstruction, but find no good reason why this should be done for any great distance, as grade of streets, if followed, will in most cases be sufficient to allow for a good drainage. Exceptions may be taken to this remark, from our neighbors doing work in congested districts such as New York, Brooklyn, or Chicago, and other cities, but for the outlying districts of these places, conditions should be on a par with gas companies.

Question No. 15. "What type and size of drip should be used on main installations over 5 lbs.?"

Thirty-six company representatives answered the questions regarding drips. There is considerable difference as to practice and opinions as to size of drip to be used. It is the general opinion that the size of drip should be determined by local conditions depending on the kind of gas distributed (as to moisture content), quantity of gas delivered through the line, number of feet of pipe supplying

*Part of report of Distribution Committee, A. G. A. Convention, October 14, 1925.

condensate to the drip, distance of drip from works, cost of drip pumping, etc.

From the several answers to the question it is noted that the line drip pot, side drip, and pipe drip, are in general use, some of the companies using one, two or all of the above style of drip depending on conditions.

It is possible that opinions regarding type of drip to be used is biased somewhat by local practice in past installations and that it would be well to gather comparative data on cost of installations, capacity and maintenance (including pumping costs) for the three types of drip now in general use for some definite determination of which type or types best suits our requirements (all things considered).

It is apparent that many of the engineers operating large distribution systems favor the so-called parallel pipe drip with full opening to line to be drained, especially on heavy pumping and transfer lines where there is a possibility of considerable condensate. This type of drip can be recommended as to reliability, cost of installation, cheap maintenance and flexibility as to capacity required or ease of change in capacity when needed.

Few companies have had any experience with gas mains carrying over 5 lbs. pressure and did not express an opinion as to proper type drip to be used for such conditions. Two companies use a baffle tank at plant or in main system near plant while others use same type drip as for pressures of 5 lbs. and less.

TYPES AND METHODS OF INSTALLING DRIPS

Question No. 14. "What type and size of drip should be used on main installations up to 5 lbs. pressure?"

USE OF MACHINERY IN MAIN INSTALLATION

Question No. 18. "To what extent do you use machinery in main or service installations?

"a. Trenching.
"b. Backfilling.
"c. Pavement breaking and breaking earth over installations already made.
"d. Pushing services.
"e. Air hammers for making joints.
"f. Miscellaneous."

Question No. 19. "State savings you are making by use of above equipment, over hand operation."

Question 20. "Submit forms for keeping costs of mechanical work as above."

Question No. 18

Answers were received from thirty-four companies to this question. Various types of equipment were reported in use. Twenty-one companies report using ditchers; thirty companies report using air compressors; eighteen companies report using backfilling machinery; six companies report the use of pipe pushing machines for service installation; five companies report boring for services with augers; one company reports having tried pipe pushing machines and finding conditions unfavorable; one company reports experimenting with pipe pushing machine; one company uses a driving machine; one company pushes pipe through sand with a water jet; eighteen companies report using air equipment for caulking joints, principally 12" and over, cast lead, lead wool and combination cast lead and cement.

Question 20

Answers to this question were made by ten companies and forms of various descriptions submitted by nine. These forms are on file at Association Headquarters.

If it is the sense of the committee that cost comparisons of machine work are desirable, suitable standard forms should be developed which will furnish information in such a manner as to make comparison reasonably easy.

Such data should be boiled down to give net results in units of area or volume costs with sufficient underlying detail, should one care to make a study of any situation. The Accounting Section Committee on Costs of Motor and Mechanical Equipment are working on this subject.

Question 21

There were 33 companies replied to this question, of which 7 reported no installations, 10 reported between 1 and 12 installations, 2 reported installations so numerous that they had no record, and 14 reported records of more than 12 installations. The

total number of central heating plants reported in actual figures was 10,599, of which 7,130 were reported by a natural gas company. Only 9 artificial gas companies reported 50 installations or more.

Question 22

Only 12 companies reported any information in reply to this question. Of those reporting, four apparently confused "co-incident" with "non-incident" demand. Only 7 replies were of any value in computing the diversity factor which, it is presumed, was the primary purpose of this question. Only two companies reported their method of determining the coincident demand. It is probable that the only accurate method of determining this demand is by the use of a considerable number of recording demand meters installed in connection with house-heating installations. Only one company reports the use of demand meters. It is apparent that the expense of this determination has prevented the accumulation of data which would be of value to the entire industry, in estimating the costs of house-heating load.

A possible alternative to the purchase of a considerable number of demand recording meters is the use of recording pressure meters. A pressure meter connected to the furnace manifold, beyond the snap valve, would record the time and duration of the use of the furnace, due to the pressure fluctuations on the manifold. The demand of the furnace could be determined easily by the use of a stop watch, and it would be fair to assume that it would not vary materially. This plan would permit the use of a considerable number of pressure meters already owned by the company. If it were necessary to purchase additional recording pressure meters, they would have a more general use for various purposes than recording demand meters. Also the cost per meter would be materially less. From the pressure charts taken on the peak house-heating day, it would be possible to determine the maximum number of house-heating installations using gas at one time and to obtain the maximum coincident demand.

Question 23

There was some confusion between the terms "co-incident" and "non-coincident" demands. Twelve companies reported a total demand of 1,247,329 cu. ft. per hour for 3,109 installations, or an average of 401.2 cu. ft. per hour per installation. No company reported the method used in determining the demands of the installations.

Question 24

The three companies having a very large number of house-heating installations, report that they have no data on this question. One company, with a large number of installations, reports—"The winter peak days are about 200 per cent over the average summer load. When the cold snap comes the load will increase in winter at a rate of 20% per day." Another company, with 1,246 central house-heating plants, reports—"The load factors for the year ending May 31, 1924, were as follows:

	Plant	Distribution
Total Business	57.3%	33.5%
1,246 Central Heating Plants	25.6%	24.5%"

Another company with 507 house-heating plants replies as follows: "The installation of these heating loads on our system has not been noticed as far as we can ascertain. During extreme cold weather, with heavy winds, a great many people use gas for auxiliary heating and that is the load that we have felt a great many times during sub-zero weather. You will note that the above maximum demand (for 507 central heating plants) is about 1% of our maximum hour, and this amount would not be noticeable to date. With more numerous central heating plant installations we expect that it will affect our distribution system to a greater degree, but there is apparently nothing to be alarmed at during the immediate future with the present house-heating rates."

Recommendations Adopted at the Distribution Conference*

As a result of the free and full discussion of subjects presented at the Distribution Conference, certain definite recommendations were made which, it is believed, will result in a definite program towards the clearing up of some differences in opinions and the standardizing of certain important practices of distribution operation.

*Detroit, Michigan, June 11 and 12, 1925.

Statistical Data on Life of Pipe

Very little data is available regarding the life of pipe in various localities and under different soil conditions. Such data should be very valuable to the distribution engineer and it was brought out at the conference that the Bureau of Standards has a very fine method of recording such data and compiling information.

It was the opinion of the conference that some very valuable data on the life of pipe could be obtained by co-operating with the Bureau of Stand-

ards and the conference went on record as recommending to the proper authorities of the American Gas Association the advisability of such co-operation.

Definition of Terms

A paper was presented at the conference setting up certain definitions for such terms as Demand, Load Factor and Diversity Factor. These terms are used by the distribution engineer in considering the design of a distribution system but there is a diversity of opinion among engineers as to the proper meaning of these terms.

It was the sense of the conference that such terms should be standardized but since other branches of the gas industry are also interested, any definitions should be formulated by a committee composed of representatives from all branches of the industry interested.

A motion was made and carried that such a representative committee be appointed which would formulate definitions and recommend to the association as a whole that they be adopted as standard.

Sub-Committees on Pipe Joints

The discussion of pipe joints by those present at the conference very clearly indicated the need of some central bureau for the compilation of information regarding various practices of making joints. This is especially true in connection with the use of cement in joint making, but it is also true, more or less, of other types of joints.

It was the opinion of those attending the conference that this was one of the most important matters before the distribution engineer today and a motion was made and carried that the conference refer to the Executive Committee of the Distribution Committee the advisability of having standing committees on cast iron pipe joints, one on bronze joints, one on cement joints, and one on combination joints. The Executive Committee considered this motion but did not feel that it was possible for such sub-committees to be organized so that they would function during the present association year. The Executive Committee therefore went on record as recommending that the 1926 Distribution Committee organize sub-committees on pipe joints and that these sub-committees obtain full information from various companies as to the manner in which they make certain types of joints, their experience with the joint, and any other information required. The sub-committees should also recommend to such companies as can do so, the actual testing of the joints and specify the nature of the tests so that the data will be comparable. These sub-committees should be standing committees functioning year after year.

Standard Forms for Recording Data Regarding Operation of Mechanical Machinery

The conference recognized the need of a standard form for recording costs and other data in connection with the use of mechanical machinery used in the installation and maintenance of mains and services.

The Accounting Section of the American Gas Association has a committee for the purpose of standardizing cost records of this kind and the conference recommended that the Distribution Section have one or more representatives on this committee so that the form would be both acceptable for accounting records and for engineering data.

Change in Present Pipe Standards Suggested

There was considerable discussion at the conference regarding the depth of bell on the larger sized pipes and some engineers expressed the opinion that the depth of the bell on pipe sizes 16 inch and larger should be increased. It was recognized that such a recommendation would entail considerable expense to the manufacturers of pipe because of new patterns, and that before such a change was recommended, it should be definitely decided whether it was justified.

It was decided that this was a matter to be taken up by the Committee on Cast Iron Pipe Standards and was referred to the chairman of that committee.

The August issue of the American Gas Association Monthly contains a questionnaire which the Committee on Cast Iron Pipe Standards has addressed to company members asking their opinions on certain changes in pipe standards. It is hoped that distribution engineers will consider carefully these questions and reply to them so that the Cast Iron Pipe Standards Committee can determine whether or not the recommendation of such changes is justified.

Specifications for Demand Meters

The 1925 Distribution Committee organized a sub-committee on demand meters for the purpose of compiling a set of recommendations which would provide information to the manufacturers of such meters as to just what the gas industry desired in the form of a demand meter.

This committee presented its report at the Distribution Conference and it was accepted. The

committee has forwarded copies of these recommendations to all manufacturers who may be interested in the construction of such a meter.

The recommendations of the Demand Meter Committee are published in these proceedings.

Inadequate House Pipe in Old Buildings

One of the company members brought up for discussion at the conference the need of some action designed to remedy conditions of inadequate house piping in old buildings arising out of increased use of gas.

The conference adopted a resolution recommending that American Gas Association Headquarters consider the appointment of a committee to draft a model ordinance designed to take care of inadequate house pipe in old buildings.

Gas Demand Recording Meters

Recommendations of the committee of the gas association

H. C. Deffenbaugh

Chairman, Rochester Gas & Electric Corpn., Rochester, N. Y.

Field of Application

THE gas demand measuring device will find its principal field of usefulness in industrial and large house-heating applications, since in these fields is to be found the widest fluctuation in gas demand. For general application in cases where the larger part of the load consists of domestic use including incidental house-heating, it will be necessary to develop a device of low cost in order to make its use practicable.

The Type of Device Required

It may be either a complete unit consisting of a gas meter with which is incorporated the demand device; it may be a demand attachment to any standard type of gas meter, or it may be a separate attachment which may be connected in the gas service line at the consumer's meter.

It is probable that the largest field of usefulness of a demand attachment will be that where the demand device can be attached to the meter by the company. With such an instrument, no change in the metering installation would be necessary and it would not be necessary for the companies to buy a large supply of different sized metering units in order to take care of their needs. The use of such an attachment would be limited entirely to installations where all consumption could be measured through one meter as the difficulty in providing a demand instrument which would totalize the readings of a bank of meters would make such an adaptation prohibitive. It seems imperative that a large volume gas meter be developed to take the place of a bank of five to thirty meters which are often required to measure the consumption of a large industrial gas consumer. In the development of such a meter, it should be a simple matter to adapt to it a demand device so that not only the consumption but the demand could be obtained.

Method of Recording Demand

The demand element may be either an indicating or a recording instrument. In the large majority of cases, the indicating type will be used. The recording type, that is, an instrument which records on a chart or printed strip the hour by hour consumption would generally be used only where the hourly load curve is desired or where an off-peak rate is given. If, for instance, the day demand and the night demand both were required, then the recording type of instrument would be necessary.

Operation of Device

If operated by a clock, it shall have a period of at least one week between re-winding, changing charts or records. If a one-month clock could be obtained, it would be of great advantage to the gas companies in eliminating the weekly trips for winding.

Demand Interval

It shall show the average demand over a time interval of either fifteen minutes, thirty minutes or one hour. By demand is meant the maximum average rate at which gas is consumed. If the device is set to register the maximum half-hour consumption, then the hourly demand is taken as twice the maximum half-hour reading.

Pressure Drop

Its operation shall be such that it will cause little or no pressure drop in consumer's gas supply. This feature is more important on low pressure artificial gas supply than in high pressure or natural gas systems.